M2

Lead Form Dimensions

The TO-202AB, TO-220AB, and TO-92 package configurations, because of their unique design, can be mounted in a variety of methods, depending upon heat sink requirements and circuit packaging methods. Any of the derived types shown in this section are available as standard parts direct from the factory. Custom package variations are available. Consult the factory for more information.

To designate lead form options, simply indicate the type number at the end of the Teccor standard part number.

Example: Q2004F312 (Signifies Type 12)

Note: When ordering a TO-202 F package, include a 1 for standard full tab package. When ordering anything other than full tab, remove the 1 and add the Lead Form Type.

See “Description of Part Numbers” in the Product Selection Guide of this catalog for a complete description of Teccor part numbers.

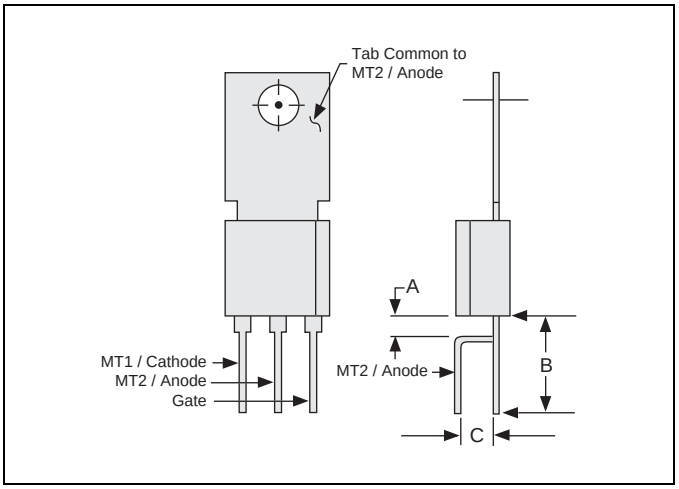
Lead Bending Specifications

Leads may be bent easily and may be bent to any desired angle, provided that the bend is made at a minimum 0.063" (0.1 for TO-218) away from the package body with a minimum radius of 0.032". DO-15X device leads may be bent with a minimum radius of 0.050", and DO-35 device leads may be bent with a minimum radius of 0.028". Leads should be held firmly between the package body and the bend, so that strain on the leads is not transmitted to the package body.

When bending leads in the plane of the leads (spreading), bend only the narrow part.

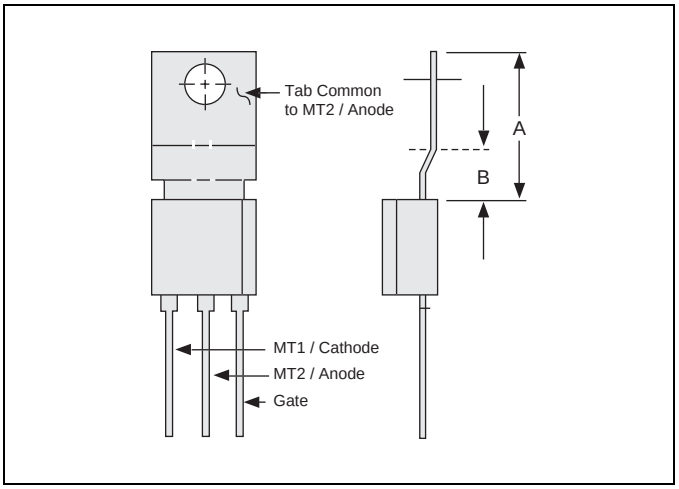
Sharp angle bends should be done only once, as repetitive bending will fatigue and break the leads.

TO-202AB Type 11 — F Package



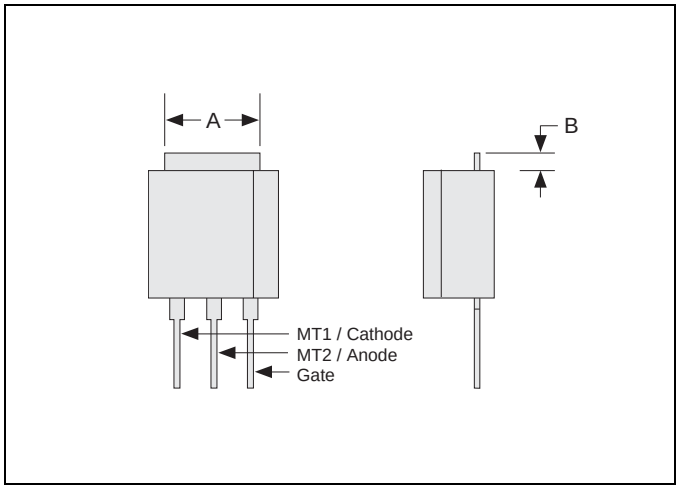
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.080	0.120	2.03	3.05
B	0.301	0.361	7.65	9.17
C	0.080	0.120	2.03	3.05

TO-202AB Type 12 — F Package



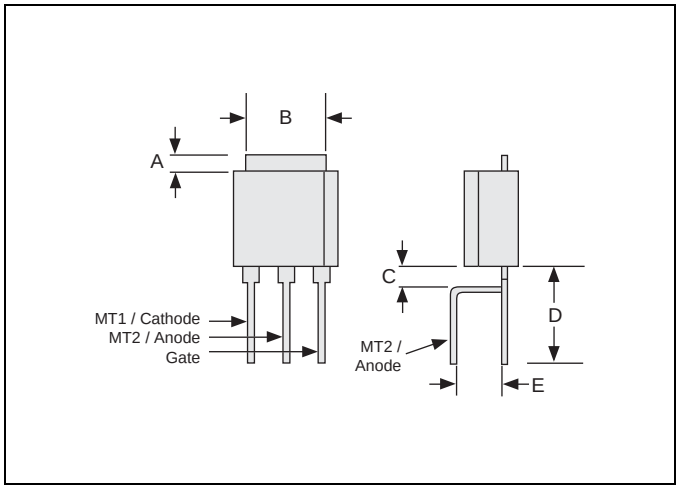
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.435	0.495	11.05	12.57
B	0.120	0.160	3.05	4.06

TO-202AB Type 2 — F Package



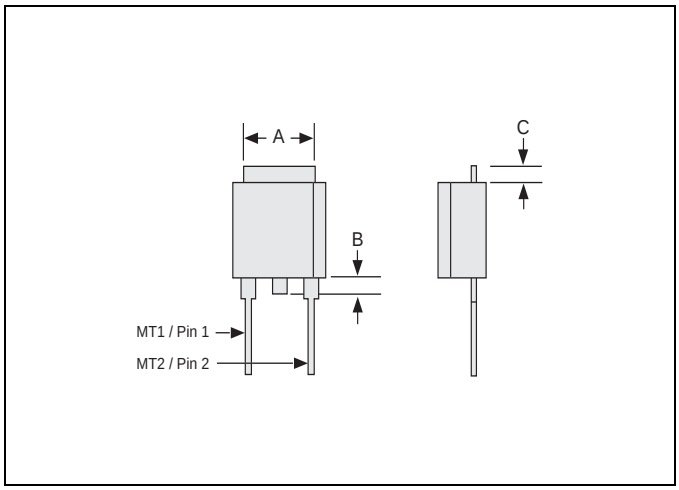
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.240	0.260	6.100	6.60
B	0.030	0.050	0.762	1.27

TO-202AB Type 21 — F Package



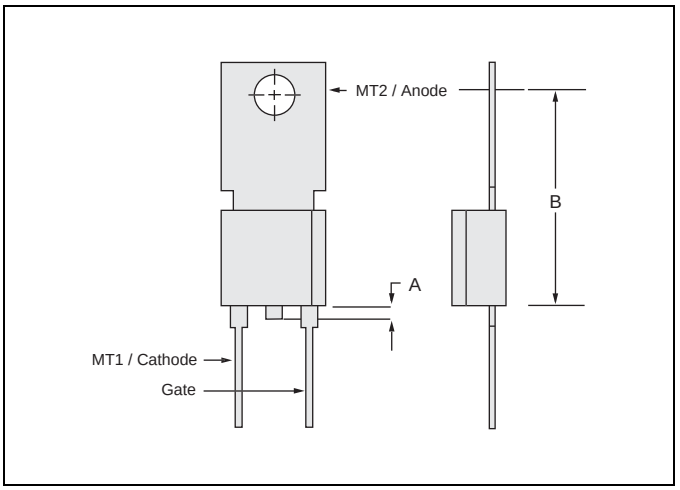
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.030	0.050	0.762	1.27
B	0.240	0.260	6.100	6.60
C	0.080	0.120	2.030	3.05
D	0.301	0.361	7.650	9.17
E	0.080	0.120	2.030	3.05

TO-202AB Type 23 — F Package
Sidac Only



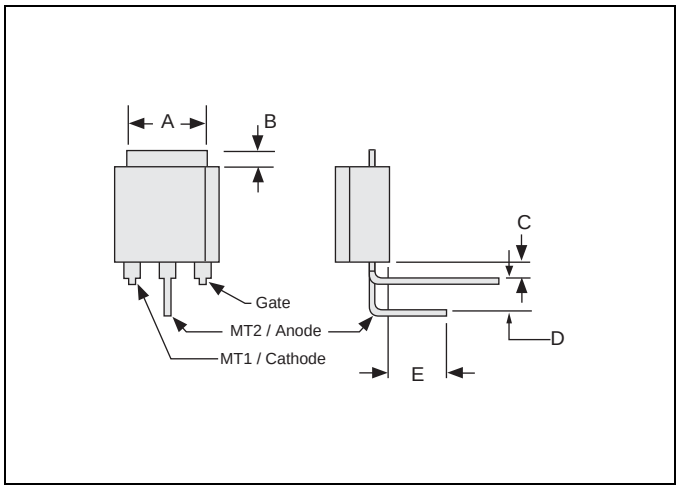
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.240	0.260	6.100	6.60
B	0.030	0.050	0.762	1.27
C	0.030	0.050	0.762	1.27

TO-202AB Type 3 — F Package
Non-isolated



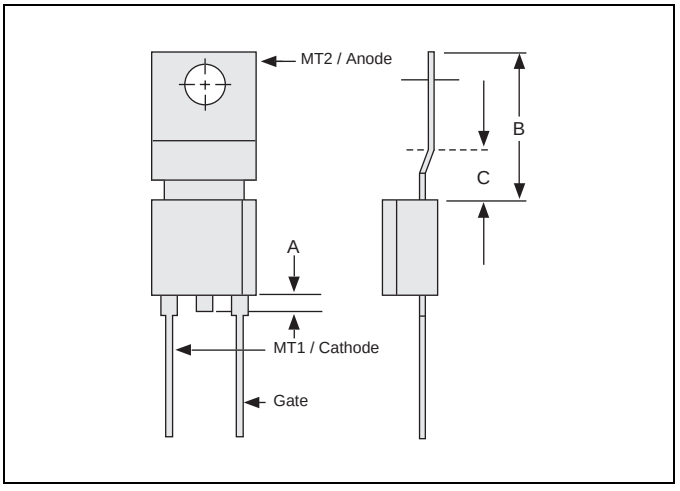
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.030	0.050	0.762	1.27
B	0.645	0.705	16.380	17.91

TO-202AB Type 26 — F Package



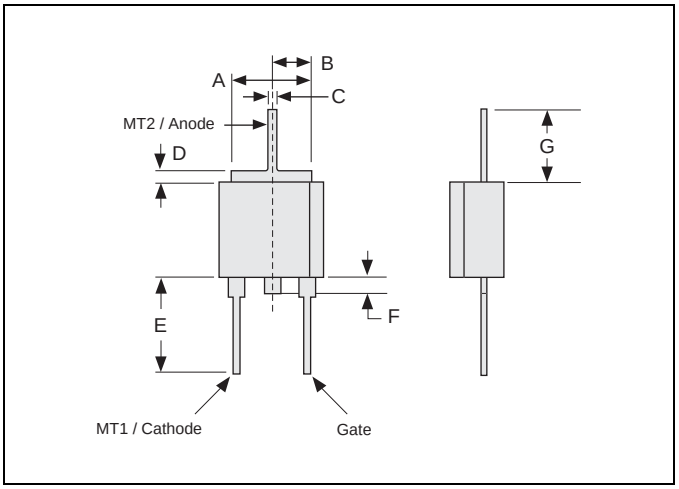
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.240	0.260	6.100	6.60
B	0.030	0.050	0.762	1.27
C	0.050	0.070	0.127	1.78
D	0.095	0.105	2.410	2.67
E	0.172	0.202	4.370	5.13

TO-202AB Type 32 — F Package
Non-isolated



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.030	0.050	0.762	1.27
B	0.435	0.495	11.050	12.57
C	0.120	0.160	3.050	4.06

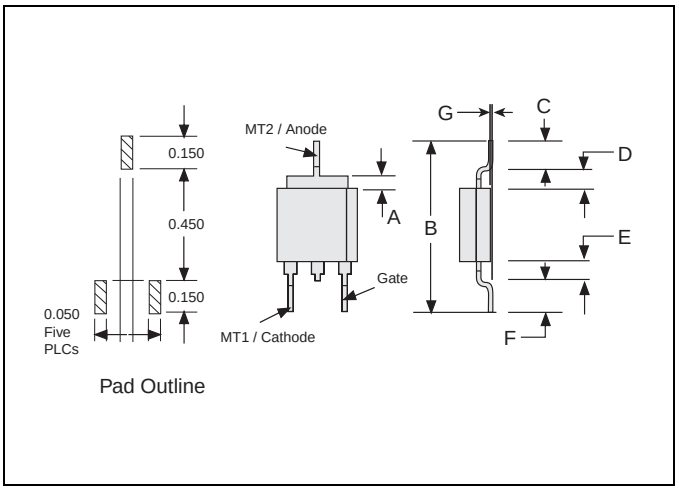
TO-202AB Type 4 — F Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.240	0.260	6.100	6.600
B	0.114	0.134	2.900	3.400
C	0.023	0.029	0.584	0.737
D	0.030	0.050	0.762	1.270
E	0.297	0.327	7.540	8.310
F	0.030	0.050	0.765	1.270
G	0.297	0.327	7.540	8.310

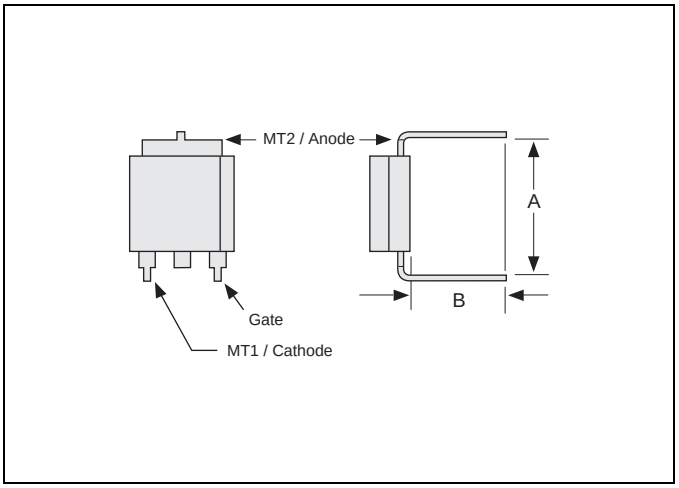
TO-202AB Type 43 — F Package

Surface Mount



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.030	0.050	0.762	1.270
B	0.680	0.760	17.270	19.300
C	0.110	0.130	2.800	3.300
D	0.080	0.100	2.030	2.540
E	0.080	0.100	2.030	2.540
F	0.110	0.130	2.800	3.300
G	0.000	0.013	0.000	0.330

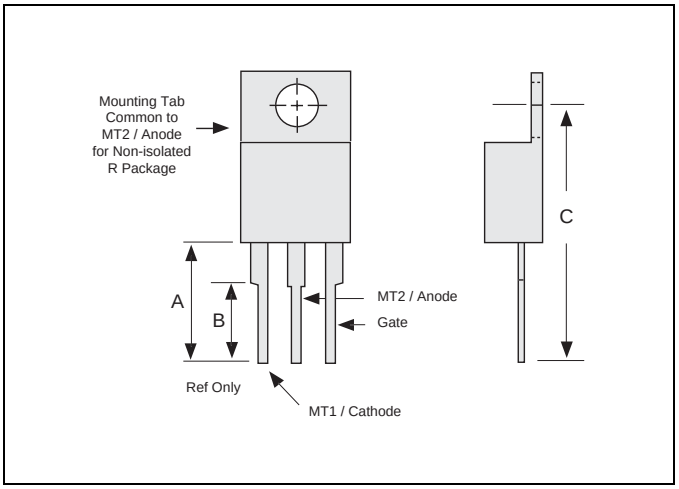
TO-202AB Type 41 — F Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.380	0.420	9.65	10.67
B	0.180	0.220	4.57	5.59

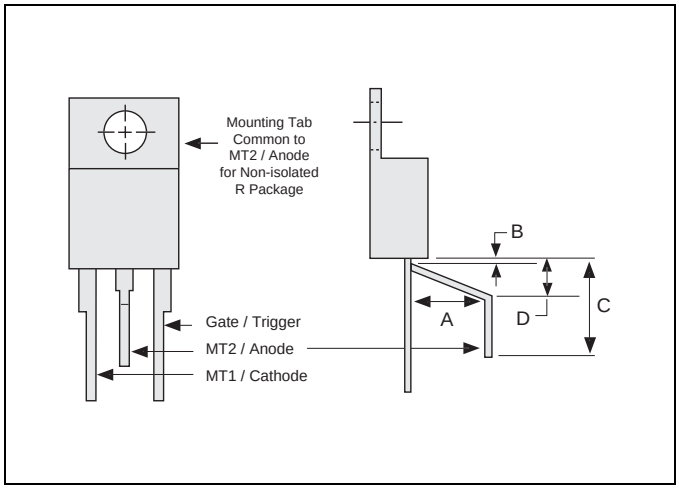
TO-220 Type 51 — R or L Package

Replaces RCA 6249



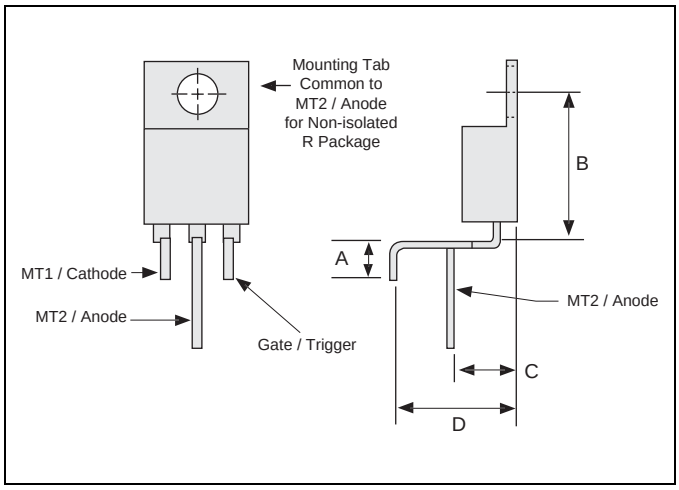
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.320	0.340	8.13	8.64
B	0.190		4.83	
C	0.795	0.850	20.19	21.59

TO-220 Type 52 — R or L Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.169	0.189	4.29	4.80
B	0.040	0.060	1.02	1.52
C	0.250		6.35	
D	0.110	0.170	2.79	4.32

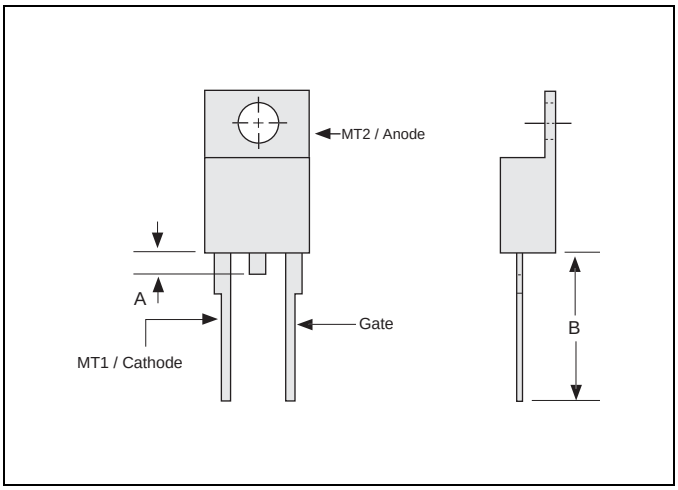
TO-220 Type 53 — R or L Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.175		4.45	
B	0.542	0.582	13.77	14.78
C	0.167	0.207	4.24	5.26
D	0.355	0.395	9.02	10.03

TO-220 Type 54 — R Package

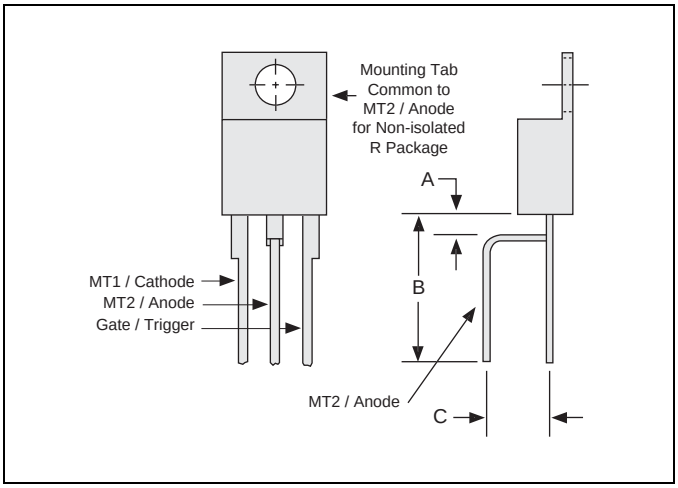
Replaces Motorola Form 4, G.E. Type 4, RCA 6206



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.040	0.070	1.02	1.78
B	0.500		12.70	

TO-220 Type 55 — R or L Package

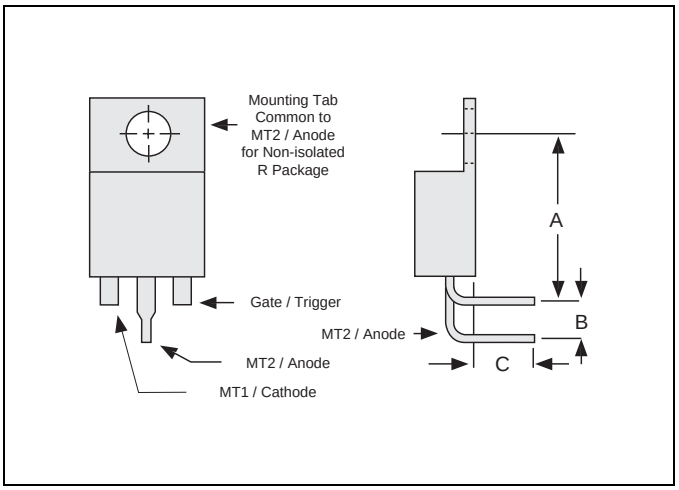
Replaces G.E. Type 5



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.065	0.095	1.65	2.41
B	0.353	0.433	8.97	11.00
C	0.115	0.130	2.92	3.30

TO-220 Type 56 — R or L Package

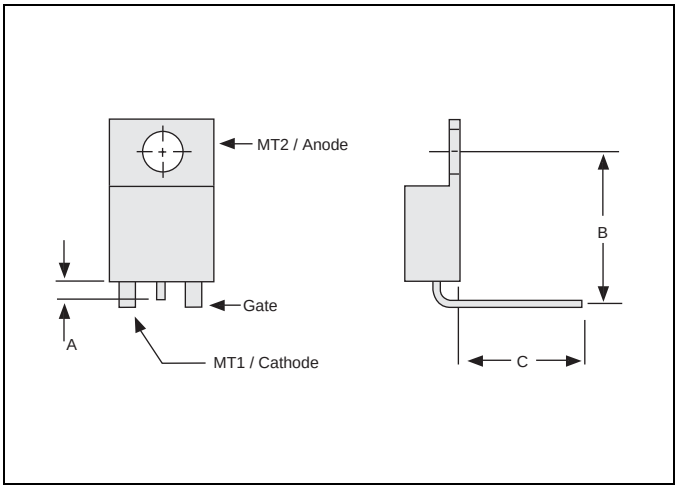
Replaces G.E. Type 6, Motorola Lead Form 3, RCA 6221



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.570	0.590	14.48	14.99
B	0.120	0.130	3.05	3.30
C	0.172	0.202	4.37	5.13

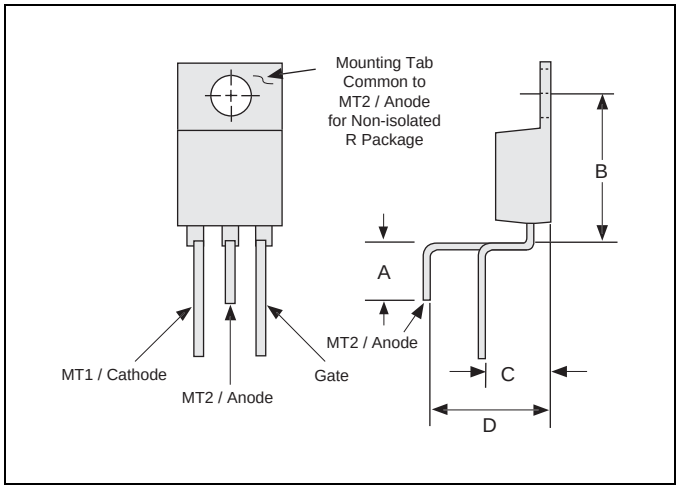
TO-220 Type 57 — R Package

Similar to TO-66, Gate-Cathode Reversed



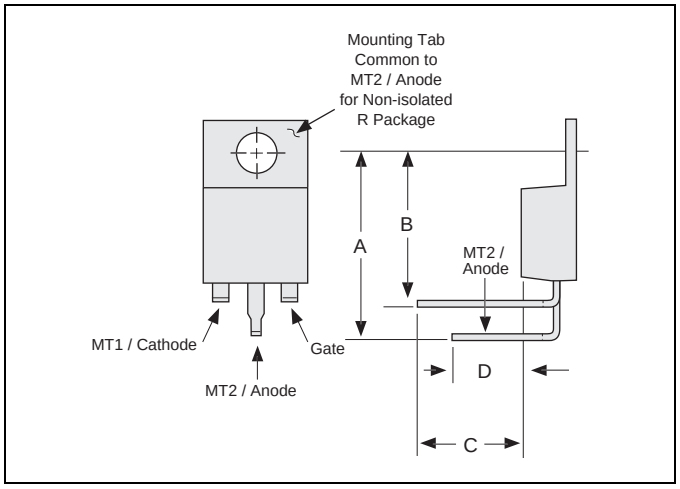
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.040	0.070	1.02	1.78
B	0.570	0.590	14.48	14.99
C	0.340	0.422	8.64	10.72

TO-220 Type 58 — R or L Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.175		4.45	
B	0.542	0.582	13.77	14.78
C	0.167	0.207	4.24	5.26
D	0.355	0.395	9.02	10.03

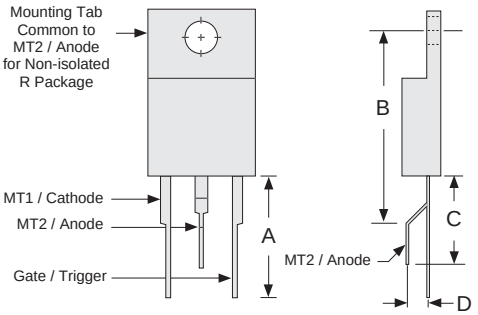
TO-220 Type 59 — R or L Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.685	0.725	17.40	18.42
B	0.558	0.598	14.17	15.19
C	0.375		9.53	
D	0.250		6.35	

TO-220 Type 65 — R or L Package

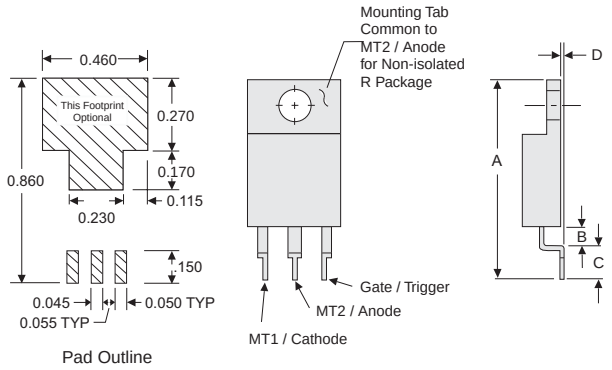
Replaces RCA 6210



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.550	0.580	13.97	14.73
B	0.820	0.860	20.83	21.84
C	0.530	0.570	13.46	14.48
D	0.080	0.120	2.03	3.05

TO-220 Type 68 — R or L Package

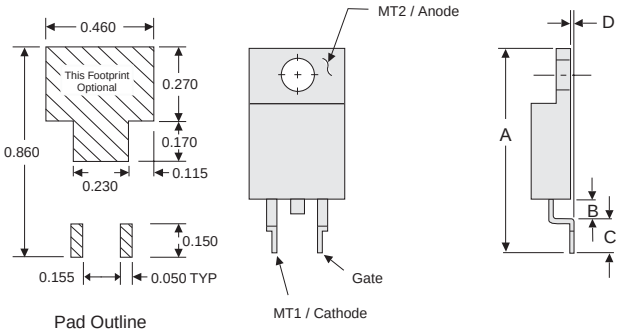
Surface Mount



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.780	0.850	19.05	21.59
B	0.080	0.100	2.03	2.54
C	0.110	0.130	2.79	3.30
D		0.013		0.33

TO-220 Type 67 — R Package

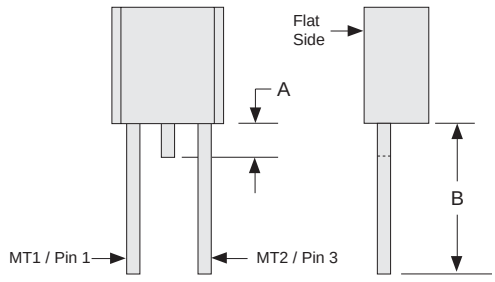
Surface Mount



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.780	0.850	19.05	21.59
B	0.080	0.100	2.03	2.54
C	0.110	0.130	2.79	3.30
D		0.013		0.33

TO-92 Type 70 — E Package

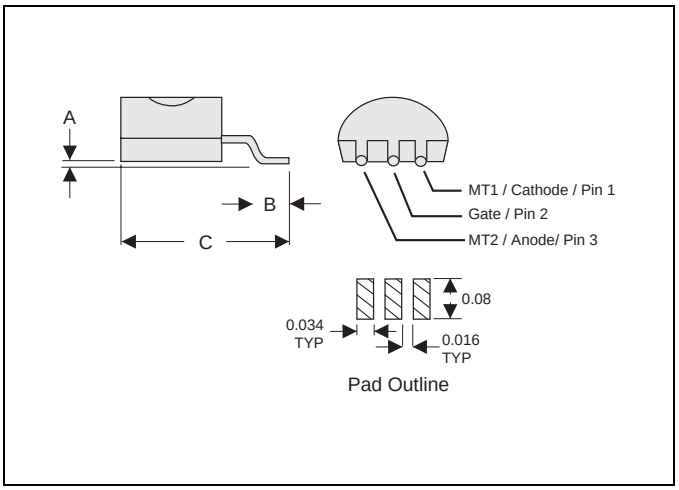
Sidac Only



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A		0.060		1.52
B	0.50		12.7	

TO-92 Type 73 — E Package

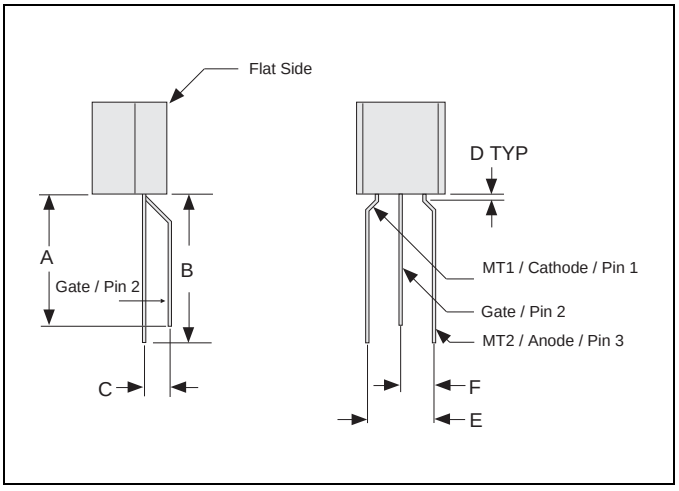
Surface Mount



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.000	0.010	0.000	0.254
B	0.052	0.067	1.320	1.700
C	0.295	0.315	7.490	8.000

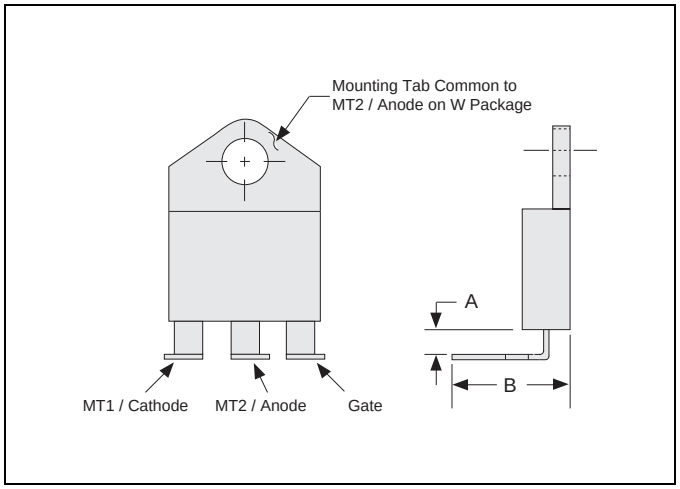
TO-92 Type 75 — E Package

Replaces TO-5 Pinout



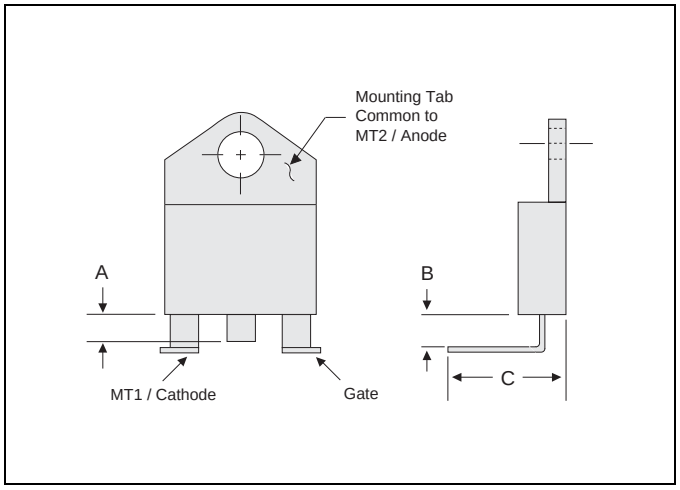
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.400		10.16	
B	0.500		12.70	
C	0.080	0.120	2.03	3.05
D	0.045	0.085	1.14	2.16
E	0.180	0.220	4.57	5.59
F	0.080	0.120	2.03	3.05

TO-218 Type 81 — K, M, J, or W Packages



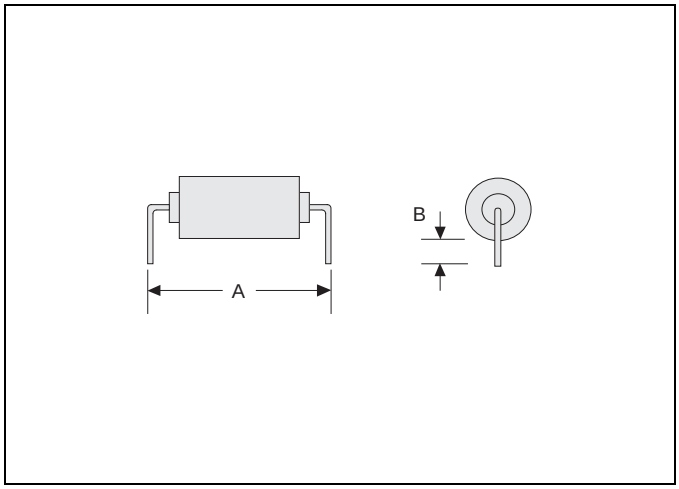
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.080	0.120	2.03	3.05
B	0.580	0.640	14.73	16.26

TO-218 Type 82 — M and W Packages



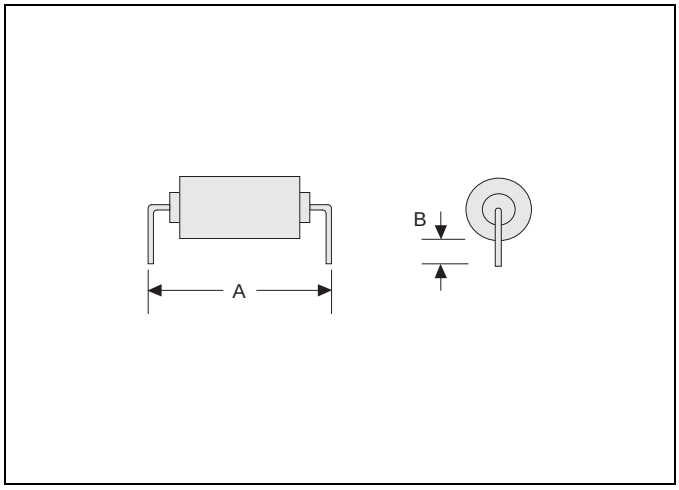
Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A		0.095		2.41
B	0.080	0.120	2.03	3.05
C	0.580	0.640	14.73	16.26

DO-35 Type 91 — Y Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.519	0.521	12.18	13.23
B	0.140	0.172	3.56	4.37

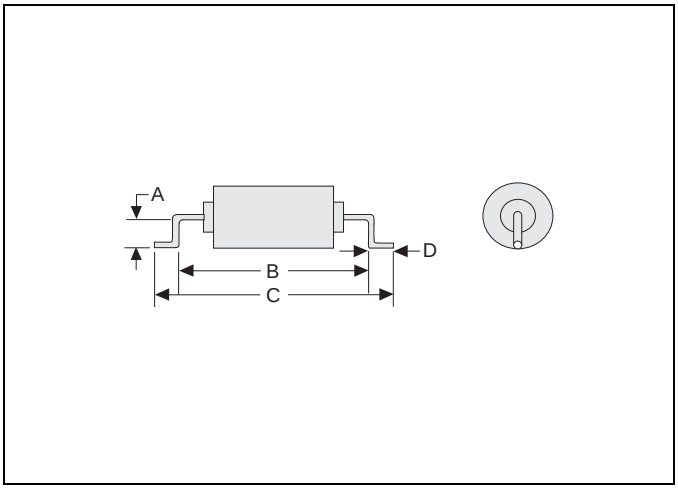
DO-35 Type 92 — Y Package



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.610	0.630	15.49	16.00
B	0.140	0.172	3.56	4.37

DO-35 Type 93 — Y Package

Surface Mount



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.020	0.060	0.508	1.52
B	0.290	0.310	7.370	7.87
C	0.370	0.430	9.400	10.92
D	0.040	0.060	1.020	1.52

Notes