MOSPEC

NPN SILICON POWER TRANSISTORS

...specifically designed for use in horizontal deflection output for B/W TV applications

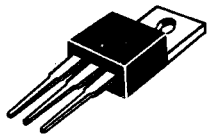
NPN

2SC2373

FEATURES:

* Low Collector-Emitter Saturation Voltage
  $V_{CE(sat)}$= 1.5V(Max) @I_C=5.0A,I_B=0.5A
* Fast Swiching Time-
  tf = 1.0 us (Max) @ I_C =5A, I_B =0.6A

7.5 AMPERE
SILICON POWER
TRANASISTORS
100 VOLTS
40 WATTS



TO-220

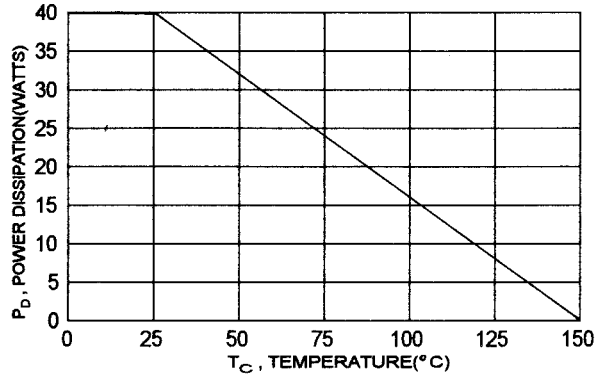
MAXIMUM RATINGS

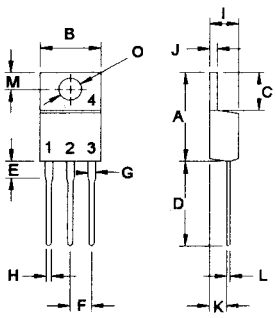
Characteristic	Symbol	2SC2373	Unit
Collector-Emitter Voltage	V_{CEO}	100	V
Collector-Base Voltage	V_{CBO}	200	V
Emitter-Base Voltage	V_{EBO}	7.0	V
Collector Current - Continuous - Peak	I_C I_{CM}	7.5 15	A
Base current	I_B	3.0	A
Total Power Dissipation @T_C = 25°C Derate above 25°C	P_D	40 0.32	W W/°C
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance Junction to Case	Rθjc	3.125	°C/W

FIGURE -1 POWER DERATING





PIN 1.BASE
2.COLLECTOR
3.EMITTER
4.COLLECTOR(CASE)

DIM	MILLIMETERS	
	MIN	MAX
A	14.68	15.31
B	9.78	10.42
C	5.01	6.52
D	13.06	14.62
E	3.57	4.07
F	2.42	3.66
G	1.12	1.36
H	0.72	0.96
I	4.22	4.98
J	1.14	1.38
K	2.20	2.97
L	0.33	0.55
M	2.48	2.98
O	3.70	3.90

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

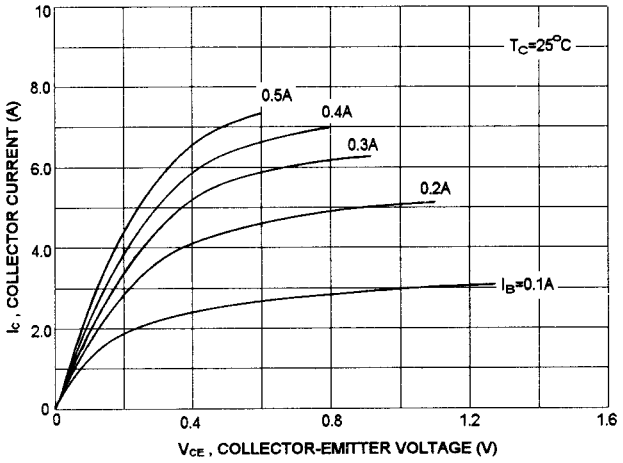
Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Voltage (I_C= 30 mA, I_B= 0)	V_{CEO}	100		V
Emitter-Base Voltage (I_B= 1.0 mA, I_C= 0)	V_{EBO}	7.0		V
Collector Cutoff Current (V_{CB}= 150 V, I_E= 0)	I_{CBO}		10	uA
Emitter Cutoff Current (V_{EB}= 5.0 V, I_C= 0)	I_{EBO}		10	uA
ON CHARACTERISTICS (1)				
DC Current Gain (I_C= 5.0 A, V_{CE}= 5.0 V) *	hFE(2)	15	70	
Collector-Emitter Saturation Voltage (I_C= 5.0 A, I_B= 500 mA)	$V_{CE(sat)}$		1.5	V
Base-Emitter Saturation Voltage (I_C= 5.0 A, I_B= 500 mA)	$V_{BE(sat)}$		1.5	V
DYNAMIC CHARACTERISTICS				
Current-Gain-Bandwidth Product (I_C = 0.1 A, V_{CE} = 5.0 V, f = 3.0 MHz)	f_T	5.0		MHz
SWITCHING CHARATERISTICS				
Turn-on Time	V_{CC}= 20 V, I_C= 5.0 A	t_{on}		1.0	us
Storage-Time	I_{B1}= -I_{B2}= 600 mA	t_s		2.5	us
Fall Time	PW= 20 us	t_f		1.0	us

(1) Pulse Test: Pulse Width =300 us,Duty Cycle ≤ 2.0%

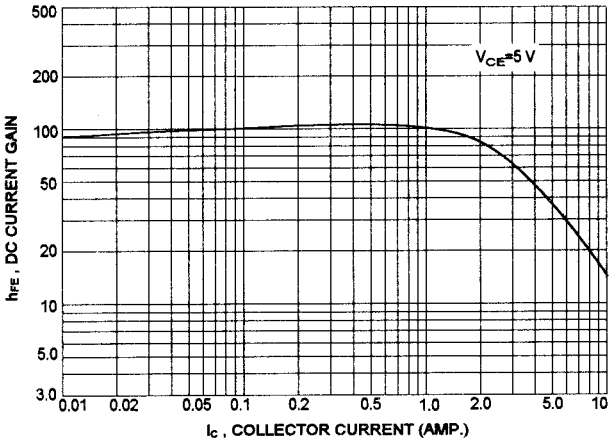
* hFE(2) Classification :

15 M 35	25 L 45	35 K 70

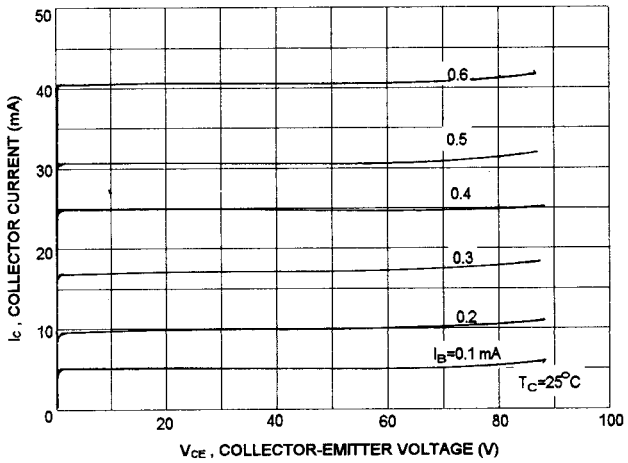
Ic - Vce



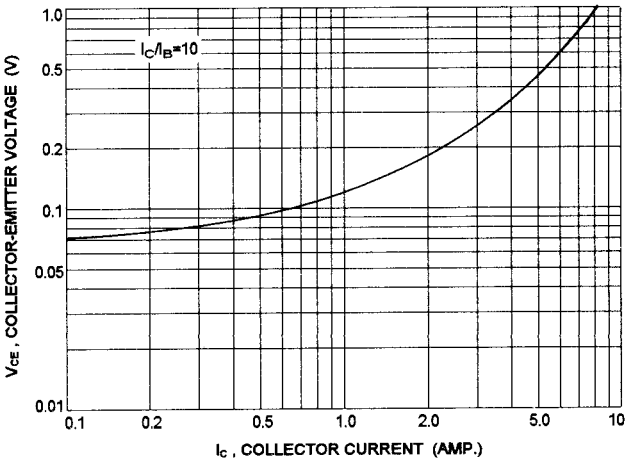
DC CURRENT GAIN



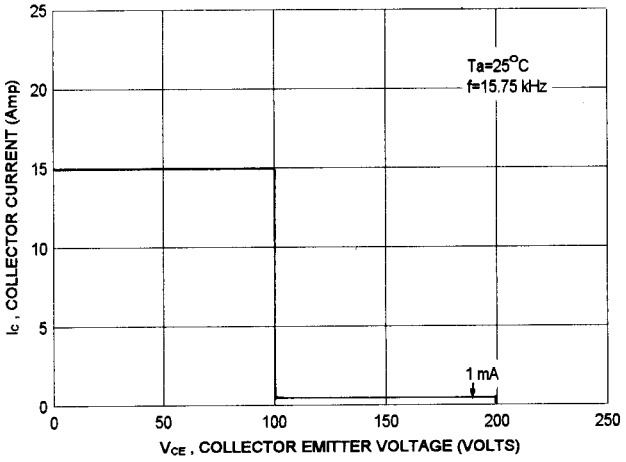
Ic - Vce



V_{CE}-Ic



SAFE OPERATING AREA



V_{BE}-Ic

