DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

MPSA42M

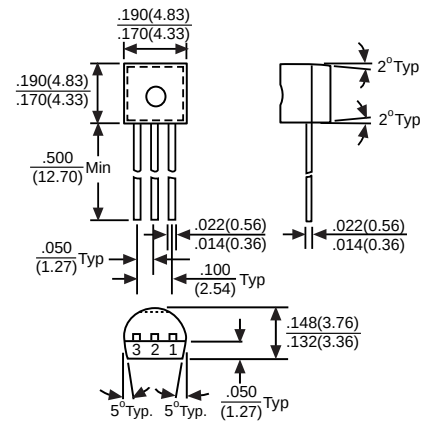
TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

Designed for use as a video output to drive color CRT, or as a dialer circuit in electronic telephone.



TO-92



Dimensions in inches and (millimeters)

Pinning

1 = Emitter
2 = Base
3 = Collector

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	800	mA
Total Power Dissipation	P_D	625	mW
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Volatge	BV_{CBO}	300	-	-	V	I_C=100μA, I_E=0
Collector-Emitter Breakdown Voltage	BV_{CEO}	300	-	-	V	I_C=1mA, I_B=0
Emitter-Base Breakdown Volatge	BV_{EBO}	6	-	-	V	I_E=10μA, I_C=0
Emitter Cutoff Current	I_{EBO}	-	-	0.1	μA	V_{EB}=3V, I_C=0
Collector-Emitter Saturation Voltage(1)	$V_{CE(sat)1}$	-	-	0.2	V	I_C=20mA, I_B=2mA
	$V_{CE(sat)2}$	-	-	0.75	V	I_C=100mA, I_B=10mA
Base-Emitter Saturation Voltage(1)	$V_{BE(sat)1}$	-	-	0.9	V	I_C=20mA, I_B=2mA
	$V_{BE(sat)2}$	-	-	1	V	I_C=100mA, I_B=10mA
DC Current Gain(1)	h_{FE1}	80	-	-	-	I_C=10mA, V_{CE}=10V
	h_{FE2}	80	-	-	-	I_C=100mA, V_{CE}=10V
	h_{FE3}	40	-	-	-	I_C=200mA, V_{CE}=10V
Transition Frequency	f_T	50	-	-	MHz	I_C=10mA, V_{CE}=20V, f=100MHz

(1)Pulse Test: Pulse Width ≦ 380μs, Duty Cycle ≦ 2%