

isc Silicon NPN Power Transistor

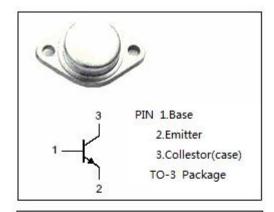
BDY38

DESCRIPTION

- · Collector-Emitter Breakdown Voltage-
 - : V_{(BR)CEO}= 40V (Min)
- · Wide area of safe operation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

 Designed for general-purpose power amplifier and switching applications.

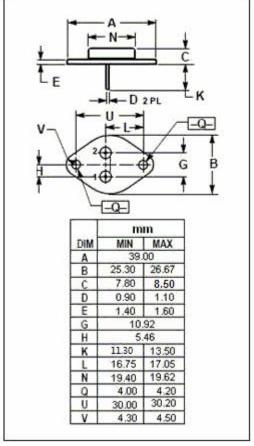


ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT	
V _{CBO}	Collector-Base Voltage	50	V	
Vceo	Collector-Emitter Voltage	40	V	
V _{EBO}	Emitter-Base Voltage	6	V	
Ic	Collector Current-Continuous	6	Α	
Pc	Collector Power Dissipation	115	W	
TJ	Junction Temperature 150		$^{\circ}$	
T _{stg}	Storage Temperature Range	-55~150	$^{\circ}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	0.83	°C/W





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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C =5A; I _B = 0.5A			1.0	V
V _{BE} (sat)	Base-Emitter Saturation Voltage	I _C =5A; I _B = 0.5A			1.5	V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 25mA; I _B = 0	40			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	6			V
h _{FE-1}	DC Current Gain	I _C =1A; V _{CE} = 5V	80		200	
h _{FE-2}	DC Current Gain	I _C =5A; V _{CE} = 5V	30			
I _{CBO}	Collector Cutoff Current	V _{CB} =50V ; I _E = 0			100	uA
I _{EBO}	Emitter Cutoff Current	V _{EB} =6V; I _C = 0			100	uA
f⊤	Current-Gain—Bandwidth Product	I _C = 0.1A; V _{CE} = 10V; f _{test} = 1.0MHz	4			MHz

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