

isc Silicon NPN Power Transistor

2SD1239

DESCRIPTION

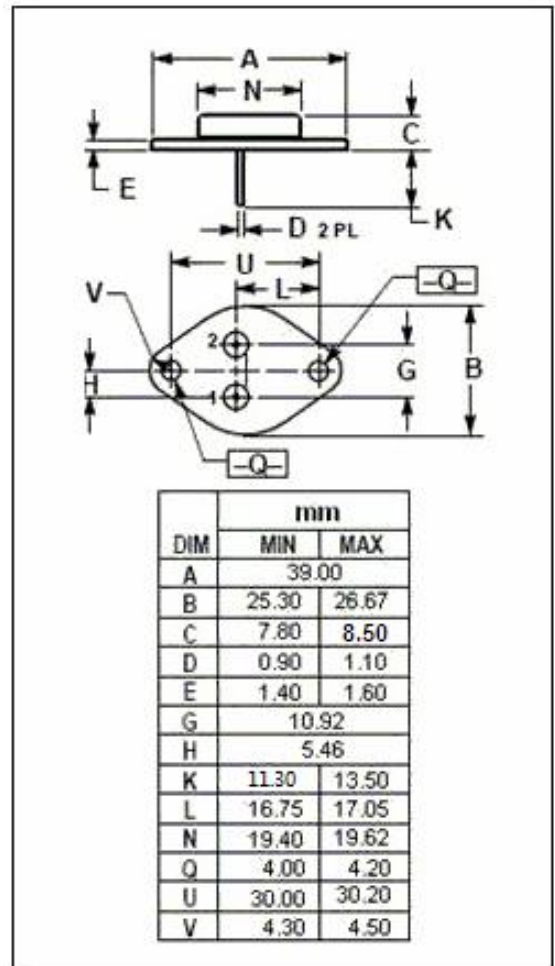
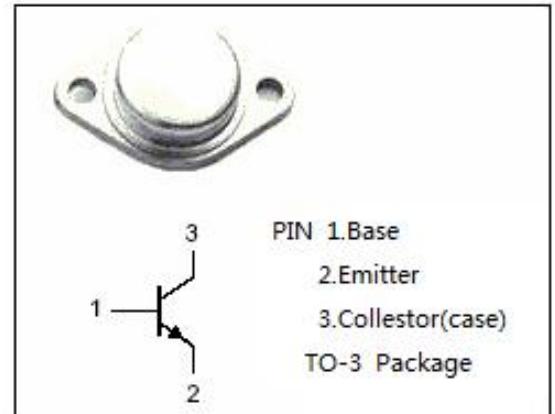
- High Current Capability
- Excellent Safe Operating Area
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching regulators
- Power amplifiers .

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	20	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @T _C =25°C	100	W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature Range	-65~150	°C



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _B = 0	150		
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; I _B = 0	120		
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	10		
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 1A		1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 10A; I _B = 1A		2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 150V; I _E = 0		0.1	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 120V; I _B = 0		0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0		0.1	mA
h _{FE-1}	DC Current Gain	I _C = 1A ; V _{CE} = 2V	100	300	
h _{FE-2}	DC Current Gain	I _C = 10A ; V _{CE} = 2V	20		
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V, f _{test} = 1MHz	200		pF

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