

isc Silicon NPN Power Transistor
2SD1242
DESCRIPTION

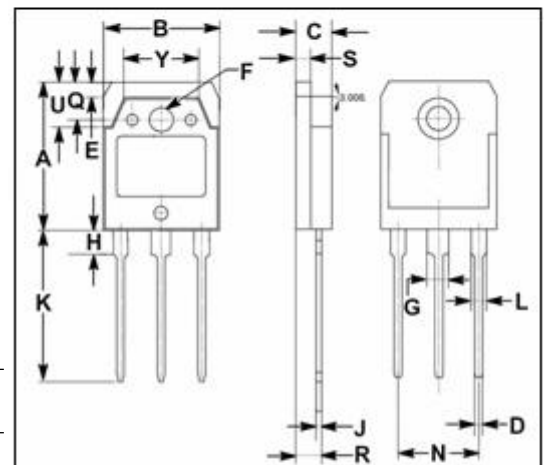
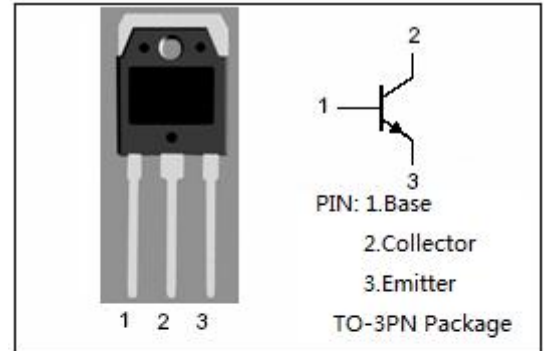
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min})$
- High Current Capability
- Excellent Safe Operating Area
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching regulators
- Power amplifiers .

Absolute maximum ratings($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	10	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	70	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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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	60		
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	60		
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	10		
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 0.4A		1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 0.4A		1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 60V; I _E = 0		0.1	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 60V; 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 = 2A; V _{CE} = 3V	70	280	
h _{FE-2}	DC Current Gain	I _C = 6A; V _{CE} = 3V	30		
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 5V	10		MHz

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