

isc Silicon NPN Power Transistor

2N6654

DESCRIPTION

- High Voltage Capability
- High Current Capability
- Low Collector Saturation Voltage-
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

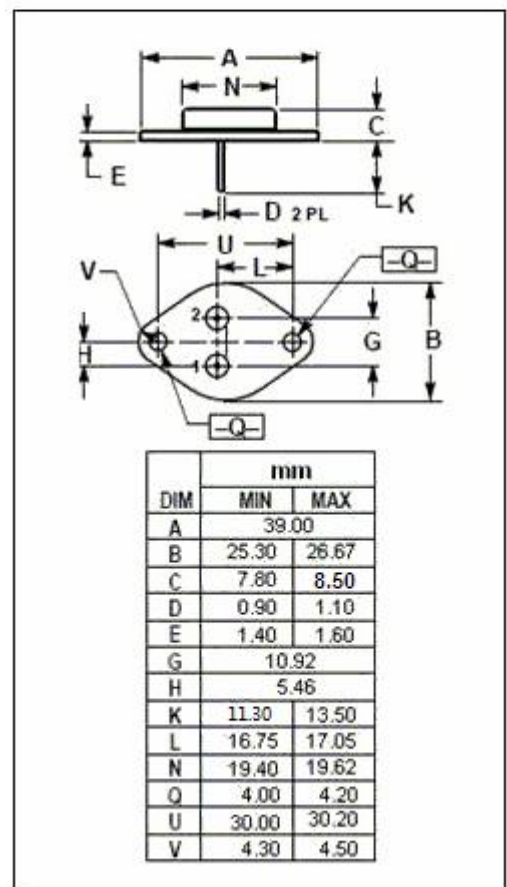
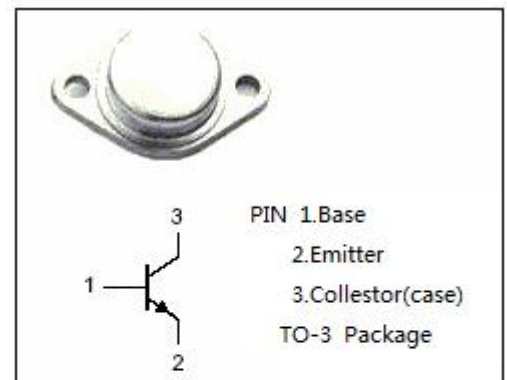
- Designed for use in switching and linear applications in military and power conversion.

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	400	V
V _{CEO}	Collector-Emitter Voltage	350	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	20	A
I _{CM}	Collector Current-Peak	30	A
I _B	Base Current-Continuous	10	A
P _C	Collector Power Dissipation @T _C =25°C	150	W
T _j	Junction Temperature	-65~175	°C
T _{stg}	Storage Temperature Range	-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.0	°C/W



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	350			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	400			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 15A; I _B = 3A			0.6	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 15A ; I _B = 3A			1.3	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 350V; I _B = 0			1.0	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 400V; I _E = 0			0.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			50	uA
h _{FE-1}	DC Current Gain	I _C = 15A ; V _{CE} = 5V	10			
h _{FE-2}	DC Current Gain	I _C = 15A ; V _{CE} = 2V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 10V, f _{test} = 10MHz		25		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		300		pF

Switching Times

t _d	Delay Time	I _C = 15A, I _{B1} = -I _{B2} = 3A V _{CC} = 200V			0.05	μ s
T _r	Rise Time				0.2	μ s
t _{stg}	Storage Time				1.5	μ s
t _f	Fall Time				0.35	μ s

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