

DESCRIPTION

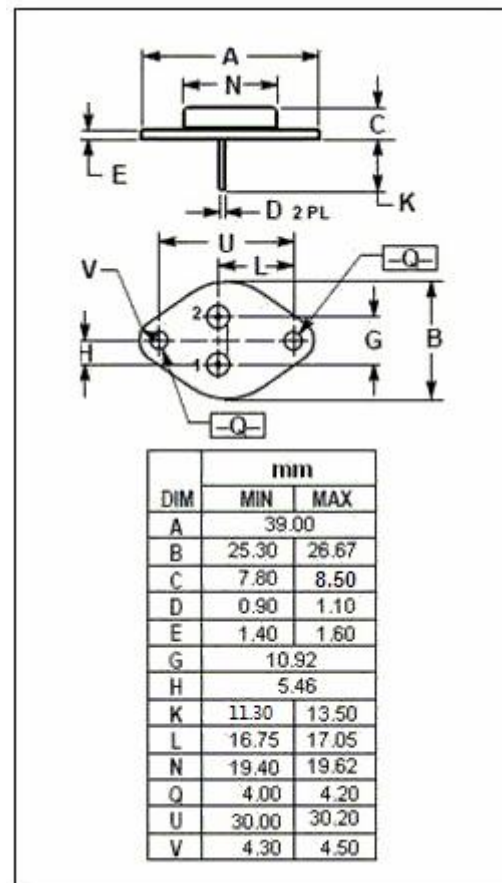
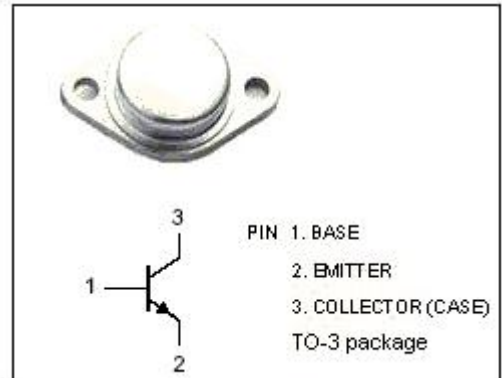
- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(sus)} = 400V(\text{Min})$
- High Switching Speed
- Wide Area of Safe Operation

APPLICATIONS

- Switching regulators
- Motor controls
- Ultrasonic generators
- Class C and D amplifiers
- Deflection circuits

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	30	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	10	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	200	W
T_J	Junction Temperature	175	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~175	$^\circ\text{C}$



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 = 30mA; R _{BE} = ∞	400			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1 mA; I _E = 0	600			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 = 20A; I _B = 4A			1.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 20A; I _B = 4A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 500V; I _E = 0 V _{CB} = 500V; I _E = 0; T _C = 100°C			0.1 2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			100	μ A
h _{FE}	DC Current Gain	I _C = 20A; V _{CE} = 5V	10		40	
f _T	Current-Gain—Bandwidth Product	I _C = 4A; V _{CE} = 10V	15			MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1.0MHz		420		pF

Switching times

t _r	Rise Time	I _C = 20A, I _{B1} = -I _{B2} = 4A; V _{CC} = 150V			0.5	μ s
t _{stg}	Storage Time				3.0	μ s
t _f	Fall Time				0.3	μ s