

isc Silicon NPN Power Transistors

BUY70C

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 200V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 5.0V(\text{Max.}) @ I_C = 4A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

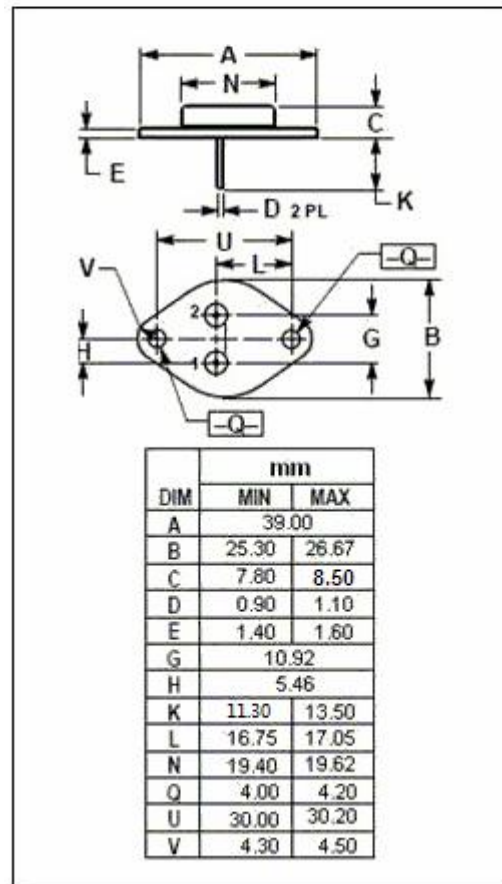
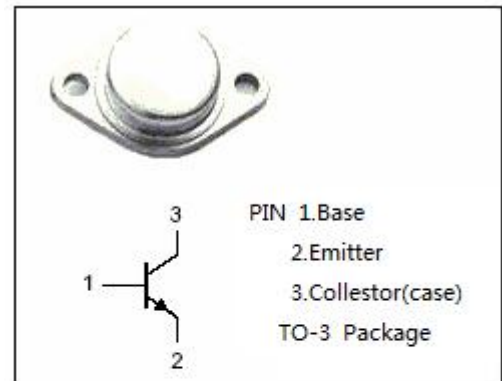
- Designed for switching mode power supplies, inverters, and CRT scanning systems.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-peak	15	A
I_B	Base Current-Continuous	3.0	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	75	W
T_j	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.3	$^\circ\text{C/W}$



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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	200			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	500			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 10mA; I _C = 0	8			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4A; I _B = 0.8A			5.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 4A; I _B = 0.8A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 500V; I _E = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 10V	15			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		6		MHz
C _{OB}	Collector Output Capacitance	I _E = 0; V _{CB} = 20V			150	pF
t _f	Fall Time	I _C = 4A; I _{B1} = -I _{B2} = 0.8A; V _{CC} = 40V			1.0	μs

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