

isc Silicon NPN Darlington Power Transistor
2SD2449
DESCRIPTION

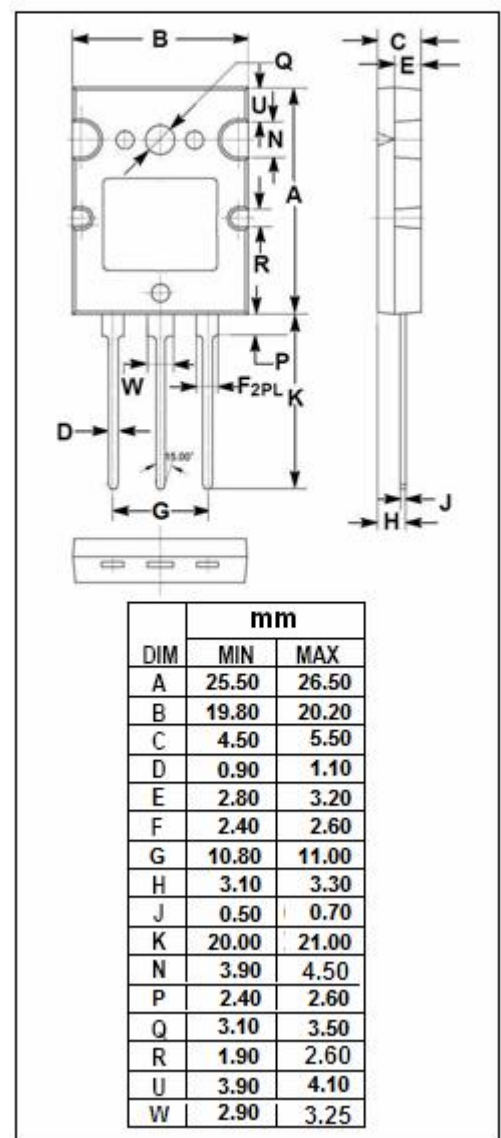
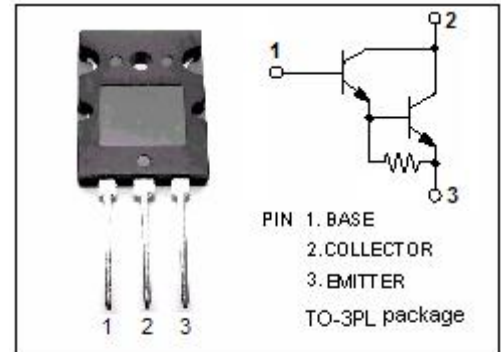
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 160V(\text{Min})$
- High DC Current Gain-
: $h_{FE} = 3000(\text{Min.}) @ (I_C = 8A, V_{CE} = 5V)$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 3.0V(\text{Max}) @ (I_C = 8A, I_B = 8mA)$
- Complement to Type 2SB1594
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	150	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 50mA ; I _B = 0	160			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 8A; I _B = 8mA			3.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 8A; V _{CE} = 5V			3.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 160V; I _E = 0			100	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 160V; I _B = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			100	μ A
h _{FE-1}	DC Current Gain	I _C = 8A; V _{CE} = 5V	3000		20000	
h _{FE-2}	DC Current Gain	I _C = 12A; V _{CE} = 5V	2000			
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 5V		30		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1MHz		150		pF

◆ h_{FE-1} Classifications

A	B	C
3000-10000	5000-15000	7000-20000

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