

Silicon NPN Darlington Power Transistor

2SB1587

DESCRIPTION

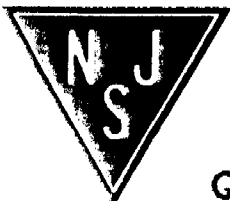
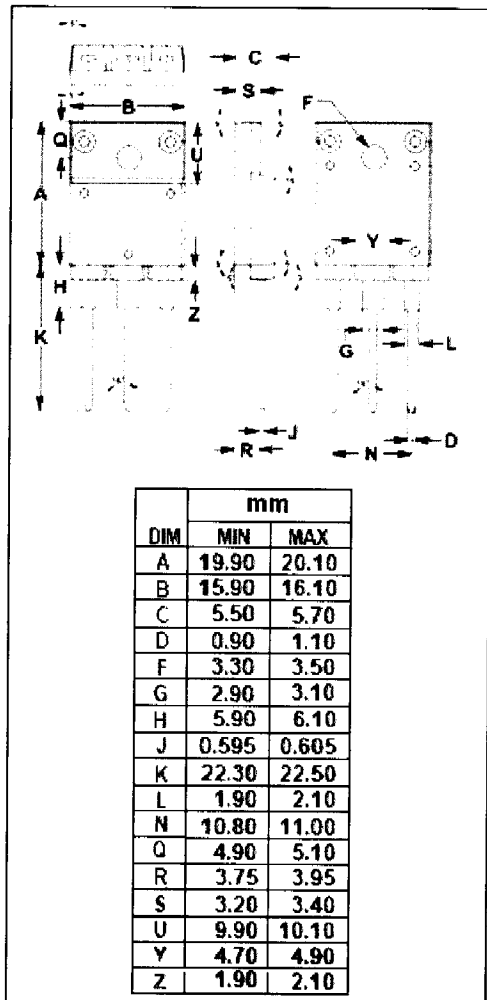
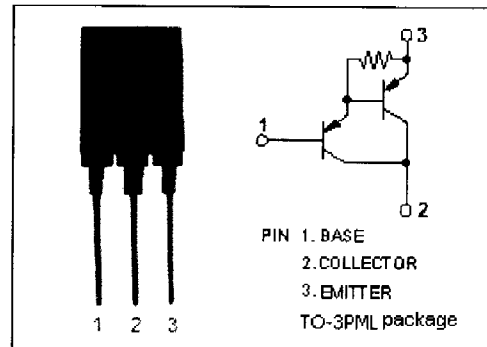
- Collector-Emitter Breakdown Voltage-
 : $V_{(BR)CEO} = -150V(\text{Min})$
- High DC Current Gain-
 : $h_{FE} = 5000(\text{Min.}) @ (I_C = -6A, V_{CE} = -4V)$
- Low Collector Saturation Voltage-
 : $V_{CE(sat)} = -2.5V(\text{Max}) @ (I_C = -6A, I_B = -6mA)$
- Complement to Type 2SD2438

APPLICATIONS

- Designed for audio, series regulator and general purpose 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	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-8	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	75	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Silicon NPN Darlington Power Transistor

2SB1587

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 = 30mA; I _B = 0	-150			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 6A; I _B = 6mA			-2.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 6A; I _B = 6mA			-3.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 160V; I _E = 0			-100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			-100	μ A
h _{FE}	DC Current Gain	I _C = 6A; V _{CE} = 4V	5000			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1MHz		85		pF
f _T	Current-Gain—Bandwidth Product	I _E = -1A; V _{CE} = 12V		65		MHz

Switching Times

t _{on}	Turn-on Time	V _{CC} = 60V, R _L = 10Ω, I _C = 6A; I _{B1} = -I _{B2} = 6mA,		0.7		μ s
t _{stg}	Storage Time			3.6		μ s
t _f	Fall Time			0.9		μ s

◆ h_{FE} Classifications

O	P	Y
5000-12000	6500-20000	15000-30000