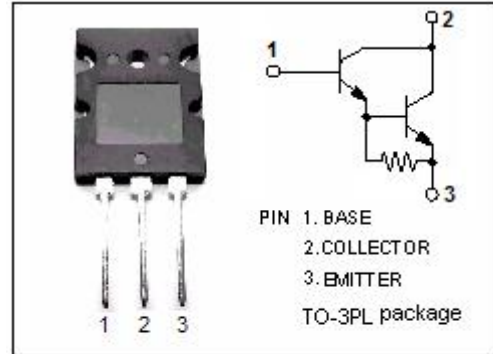


isc Silicon NPN Darlington Power Transistor
2SD2222
DESCRIPTION

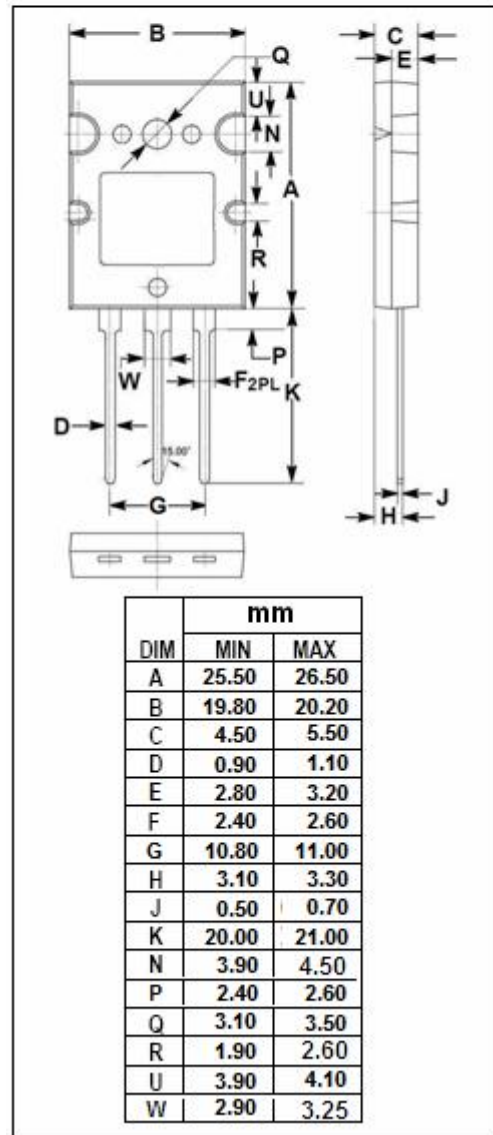
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 160V(\text{Min})$
- High DC Current Gain-
: $h_{FE} = 3500(\text{Min.}) @ (I_C = 7A, V_{CE} = 5V)$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 3.0V(\text{Max}) @ (I_C = 7A, I_B = 7mA)$
- Complement to Type 2SB1470
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


APPLICATIONS

- Designed for power amplification.

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	8	A
I_{CM}	Collector Current-Peak	15	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	3.5	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	150	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$



isc Silicon NPN Darlington Power Transistor

2SD2222

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	160			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 7mA			3.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 7A; I _B = 7mA			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 = 1A; V _{CE} = 5V	1000			
h _{FE-2}	DC Current Gain	I _C = 7A; V _{CE} = 5V	3500		20000	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		20		MHz

◆ h_{FE-2} Classifications

Q	P
3500-10000	7000-20000

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