

isc Silicon NPN Power Transistor

2SD1255

**DESCRIPTION**

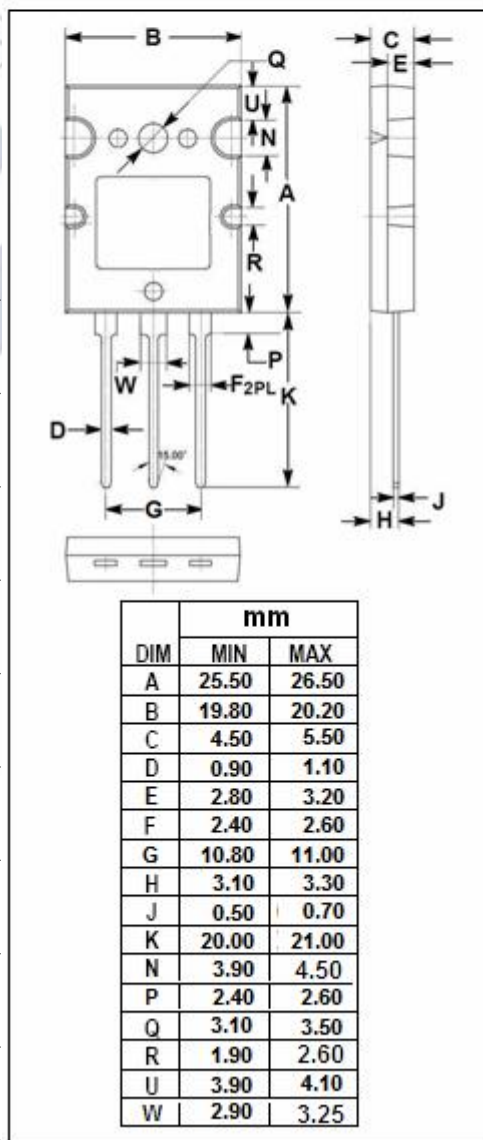
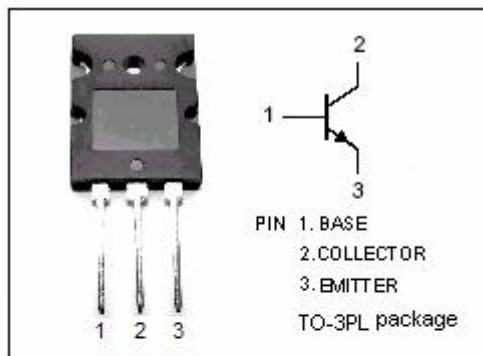
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 130V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)} = 0.5V(\text{Max.}) @ I_C = 3.0A$
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Power amplifier applications
- Switching regulators

**ABSOLUTE MAXIMUM RATINGS(Ta=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	130	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	4	A
$I_{CM}$	Collector Current-Peak	8	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	35	W
$T_J$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C



**isc Silicon NPN Power Transistor****2SD1255****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}; I_B=0$	130			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3.0\text{A}; I_B=0.15\text{A}$			0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3.0\text{A}; I_B=0.15\text{A}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=150\text{V}; I_E=0$			50	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			50	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=2\text{V}$	45			
$h_{FE-2}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	90		260	
$f_T$	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}$		30		MHz

◆  **$h_{FE-2}$  Classifications**

Q	P
90-180	130-260