

isc Silicon NPN Power Transistor
2N6289
DESCRIPTION

- DC Current Gain-
: $h_{FE} = 30-150 @ I_C = 3A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 30V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

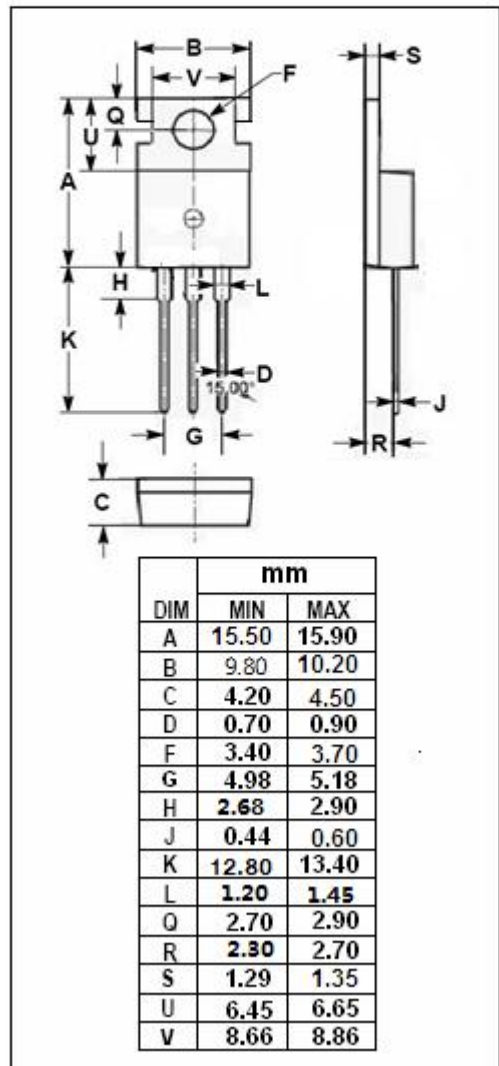
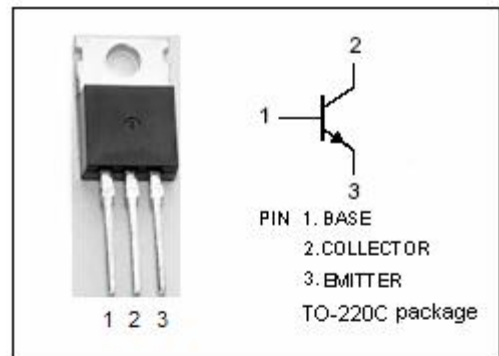
- Designed for use in general-purpose amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C}/\text{W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C}/\text{W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CE0(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA ; I _B = 0	30		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 3A		3.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 7A ; V _{CE} = 4V		3.0	V
I _{CEX}	Collector Cutoff Current	V _{CE} = 40V; V _{BE(off)} = 1.5V V _{CE} = 30V; V _{BE(off)} = 1.5V; T _C = 150°C		0.1 2.0	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 30V; I _B = 0		1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0		1.0	mA
h _{FE-1}	DC Current Gain	I _C = 3A ; V _{CE} = 4V	30	150	
h _{FE-2}	DC Current Gain	I _C = 7A ; V _{CE} = 4V	2.3		
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V; f _{test} = 1MHz		250	pF
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A ; V _{CE} = 4V; f _{test} = 1MHz	10		MHz

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