

**isc Silicon NPN Power Transistor**

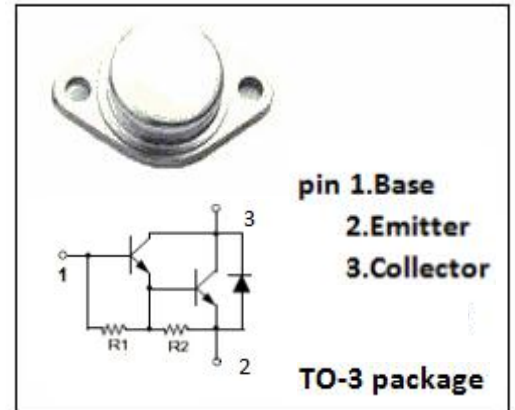
**2N6578**

**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO}=120V(\text{Min})$
- Collector-Emitter Saturation Voltage-  
:  $V_{CE(sat)}= 4.0V(\text{Max}) @I_C=15A$

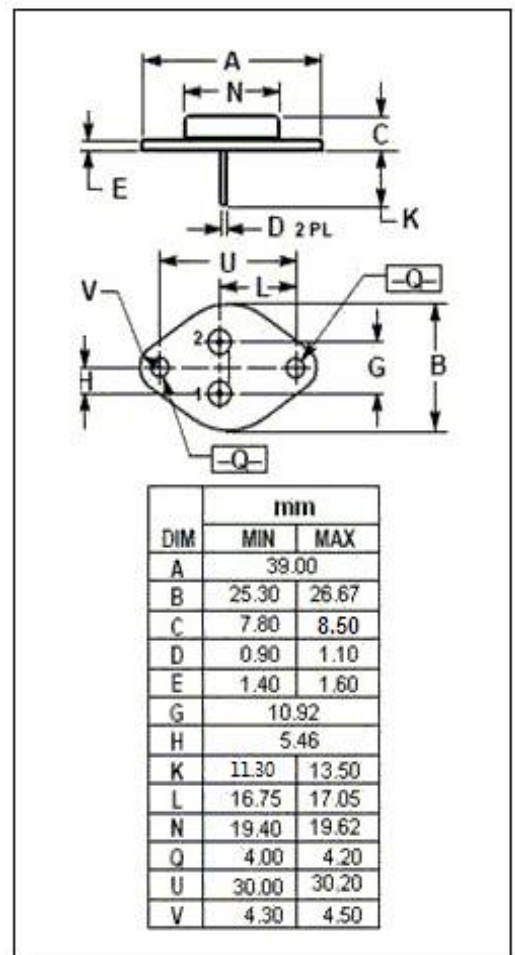
**APPLICATIONS**

- Designed for power amplifier, high speed switching and regulated power supply applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	120	V
$V_{CEO}$	Collector-Emitter Voltage	120	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$P_C$	Collector Power Dissipation	120	W
$T_J$	Junction Temperature	175	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~175	$^\circ\text{C}$



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.46	$^\circ\text{C/W}$

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## ELECTRICAL CHARACTERISTICS

T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>c</sub> =0.2mA; I <sub>B</sub> = 0	120	--	--	V
I <sub>CB0</sub>	Collector Cutoff Current	V <sub>CB</sub> = 120V; I <sub>b</sub> =0	--	--	0.5	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 120V; I <sub>b</sub> =0	--	--	1.0	mA
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>c</sub> = 15A; I <sub>B</sub> = 0.15A	--	--	4.0	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>c</sub> = 10A; I <sub>B</sub> =0.1A	--	--	2.8	V
V <sub>BE(sat)-1</sub>	Base -Emitter Saturation Voltage	I <sub>c</sub> = 15A; I <sub>B</sub> = 0.15A	--	--	4.5	V
V <sub>BE(sat)-2</sub>	Base -Emitter Saturation Voltage	I <sub>c</sub> = 10A; I <sub>B</sub> =0.1A	--	--	3.5	V
h <sub>FE</sub>	DC Current Gain	I <sub>c</sub> = 15A; V <sub>CE</sub> = 4V	100	--	--	
h <sub>FE</sub>	DC Current Gain	I <sub>c</sub> = 10A; V <sub>CE</sub> = 3V	500	--	5000	
h <sub>FE</sub>	DC Current Gain	I <sub>c</sub> = 4A; V <sub>CE</sub> = 3V	2000	--	20000	
h <sub>FE</sub>	DC Current Gain	I <sub>c</sub> = 0.4A; V <sub>CE</sub> = 3V	200	--	--	

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