

**isc Silicon NPN Power Transistor**

**2SC3180**

**DESCRIPTION**

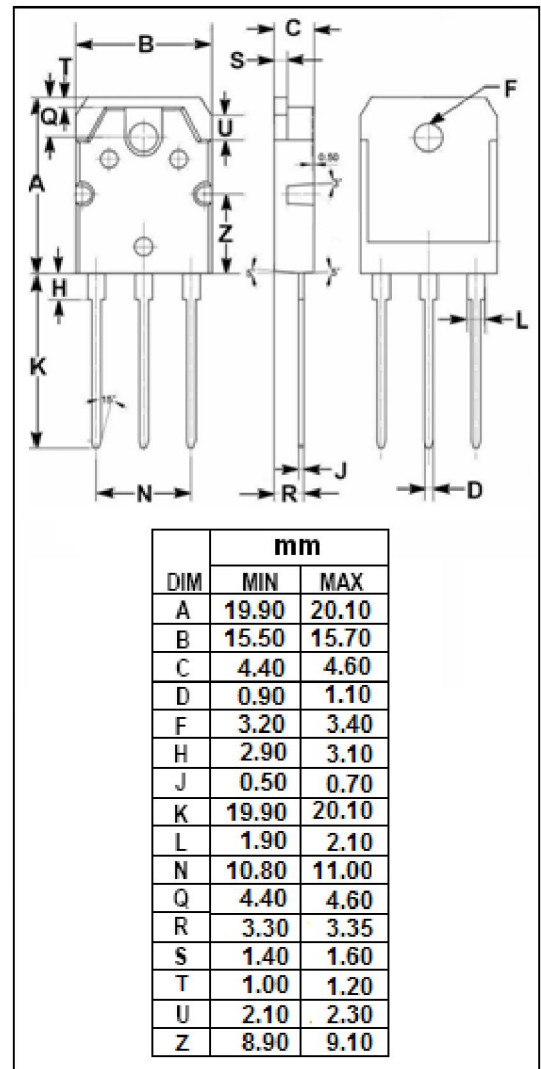
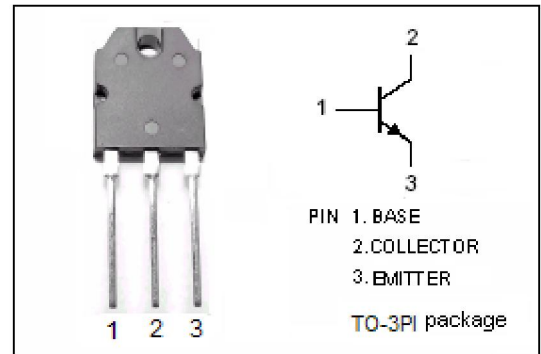
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = 2.0V(\text{Max.}) @ I_C = 5A$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SA1263

**APPLICATIONS**

- Power amplifier applications
- Recommend for 40W high fidelity audio frequency amplifier output stage applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEO}$	Collector-Emitter Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	6	A
$I_B$	Base Current-Continuous	0.6	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	60	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon NPN Power Transistor****2SC3180****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	$I_C=50\text{mA}; I_B=0$	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=0.5\text{A}$			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=3\text{A}; V_{CE}=5\text{V}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=80\text{V}; I_E=0$			5	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			5	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	55		160	
$h_{FE-2}$	DC Current Gain	$I_C=3\text{A}; V_{CE}=5\text{V}$	35			
$C_{OB}$	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1.0\text{MHz}$		105		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=5\text{V}$		30		MHz

◆  **$h_{FE-1}$  Classifications**

R	O
55-110	80-160