

isc Silicon NPN Power Transistor
2SC1060
DESCRIPTION

- With TO-220 package
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50V(\text{Min})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 2A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

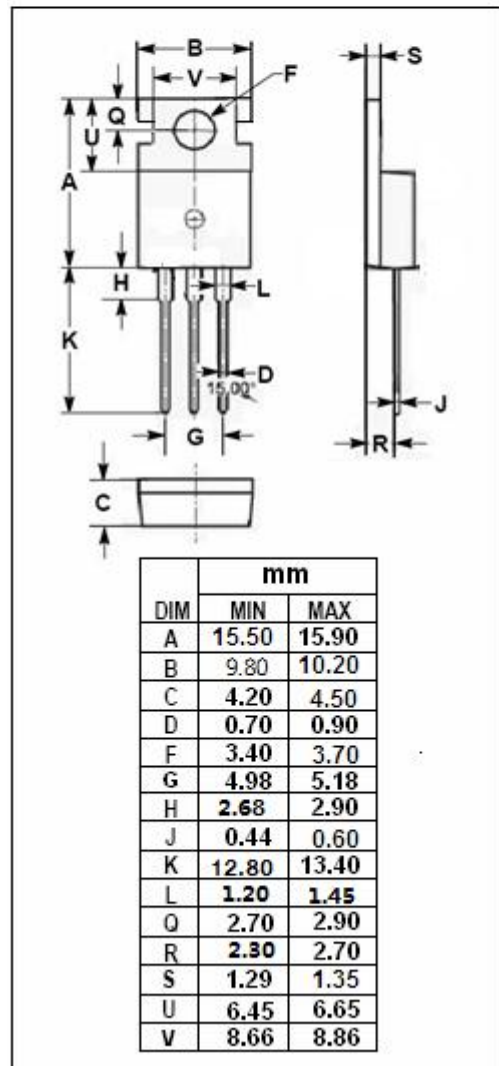
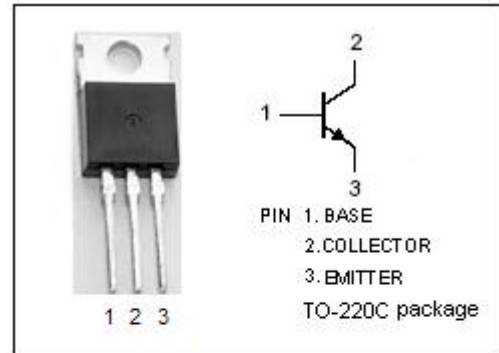
- Switching regulators
- DC-DC convertor
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	25	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5.0	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS
 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}$; $I_B=0$	50		V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=5\text{mA}$; $I_E=0$	50		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=5\text{mA}$; $I_C=0$	4		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}$; $I_B=0.2\text{A}$		1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=1\text{A}$; $V_{CE}=4\text{V}$		1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=20\text{V}$; $I_B=0$		0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=4\text{V}$; $I_C=0$		0.1	mA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}$; $V_{CE}=4\text{V}$	35	320	
h_{FE-2}	DC Current Gain	$I_C=5\text{A}$; $V_{CE}=2\text{V}$	35		

◆ h_{FE} Classifications

A	B	C	D
35-70	60-120	100-200	160-320

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