

isc Silicon NPN Power Transistor

2SC4512

DESCRIPTION

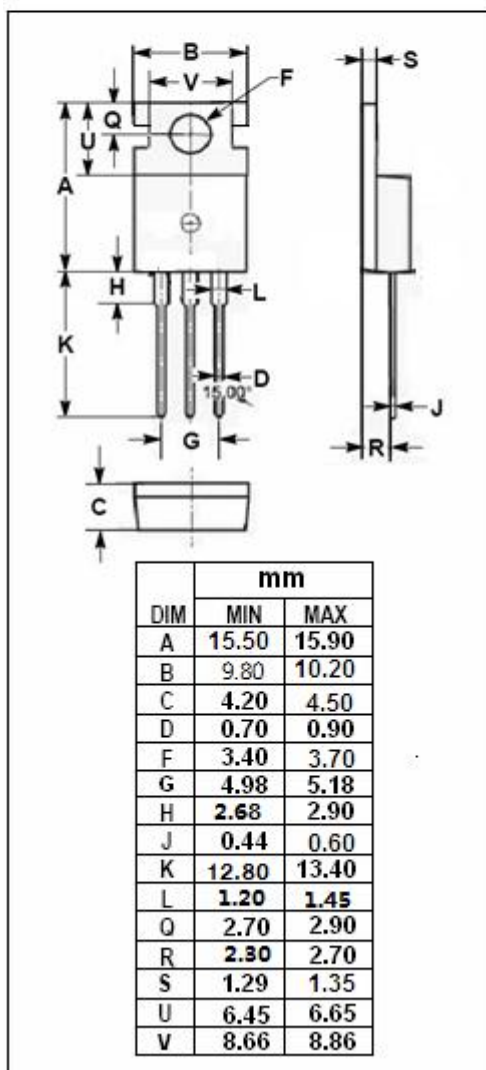
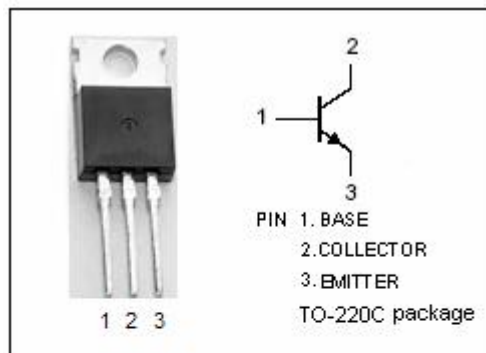
- Low Collector Saturation Voltage
: $V_{CE(sat)} = 0.5(V)(Max) @ I_C = 2A$
- High Switching Speed
- Complement to Type 2SA1726
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	3	A
P_C	Total Power Dissipation @ $T_C=25^{\circ}C$	50	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$



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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	$I_C=25\text{mA}$; $I_B=0$	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}$; $I_B=0.2\text{A}$			0.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=120\text{V}$; $I_E=0$			10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=6\text{V}$; $I_C=0$			10	μA
h_{FE}	DC Current Gain	$I_C=2\text{A}$; $V_{CE}=4\text{V}$	50		180	
f_T	Current-Gain—Bandwidth Product	$I_E=0.5\text{A}$; $V_{CE}=12\text{V}$		20		MHz
C_{OB}	Output Capacitance	$I_E=0$; $V_{CB}=10\text{V}$; $f_{test}=1\text{MHz}$		110		pF

Switching Times

t_{on}	Turn-on Time	$I_C=3\text{A}$, $R_L=10\Omega$, $I_{B1}=-I_{B2}=0.3\text{A}$, $V_{CC}=30\text{V}$		0.16		μs
t_{stg}	Storage Time			2.60		μs
t_f	Fall Time			0.34		μs

◆ h_{FE} Classifications

O	P	Y
50-100	70-140	90-180

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