

**isc Silicon NPN Power Transistor**
**2SC5042**
**DESCRIPTION**

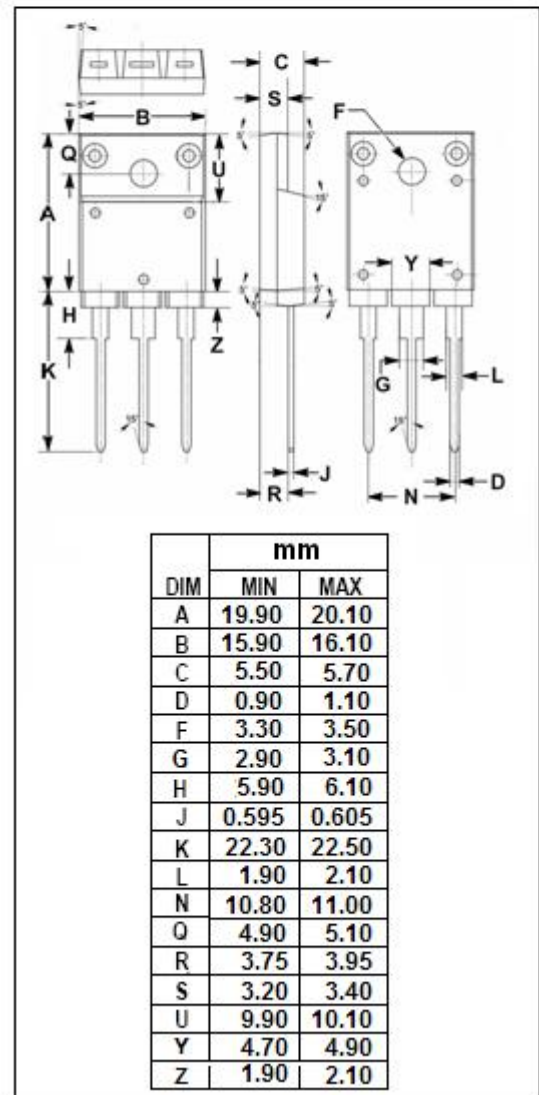
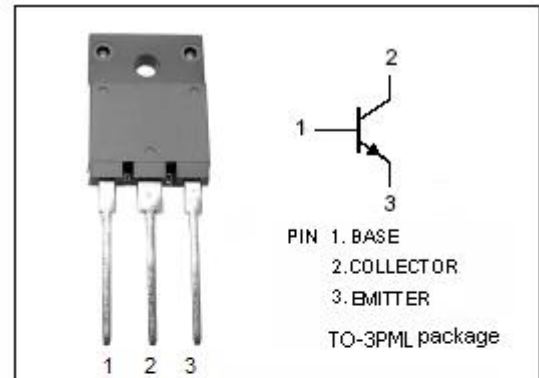
- NPN triple diffused planar silicon transistor
- High Breakdown Voltage
- High Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Very high-definition CRT display horizontal deflection output applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	1600	V
$V_{CEO}$	Collector-Emitter Voltage	800	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current-Continuous	7	A
$I_{CP}$	Collector Current-Peak	16	A
$P_C$	Collector Power Dissipation @ $T_a=25^{\circ}\text{C}$	3	W
	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	60	
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



**isc Silicon NPN Power Transistor****2SC5042****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=10\text{mA}; I_B=0$	800			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.25\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.25\text{A}$			1.5	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=800\text{V}; R_{BE}=0$			10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=4\text{V}; I_C=0$			1.0	mA
$h_{FE-1}$	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	15		25	
$h_{FE-1}$	DC current gain	$I_C=5\text{A}; V_{CE}=5\text{V}$	4		7	

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