

isc Silicon NPN Power Transistor

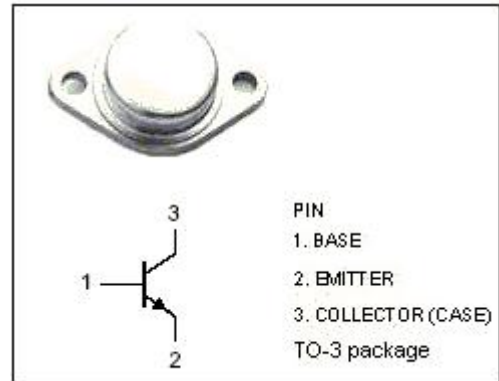
2SC1413A

DESCRIPTION

- High Collector-base breakdown voltage:1500V
- Low saturation voltage@5A
- Large area of safe operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

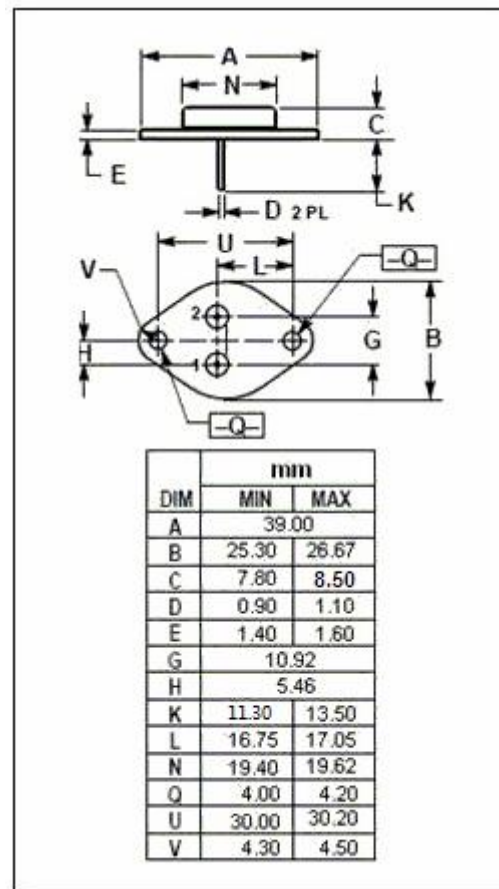
APPLICATIONS

- Designed for the horizontal output stage in power-transformer-less television receivers.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	50	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	20	
T_J	Junction Temperature	230	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-45~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=10\text{mA}$; $I_E=0$	500			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\text{mA}$; $I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}$; $I_B=1.2\text{A}$			10	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}$; $I_B=1.2\text{A}$			2	V
I_{CBX}	Collector Cutoff Current	$V_{CB}=1500\text{V}$; $V_{EB}=1.5\text{V}$			1	mA

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