

isc Silicon NPN Power Transistor
2N4232A
DESCRIPTION

- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

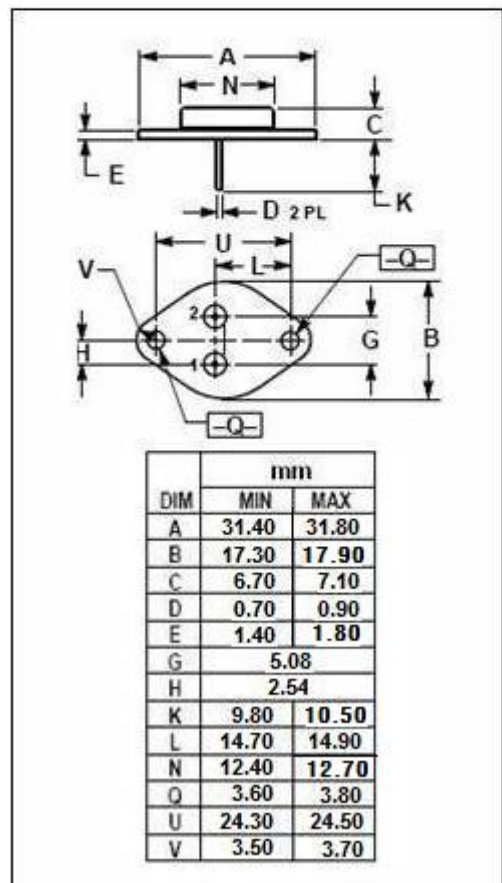
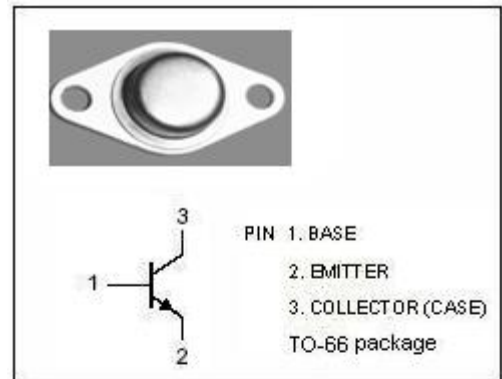
- Designed for general-purpose power amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	5	A
P_C	Collector Power Dissipation@ $T_C=25^\circ\text{C}$	75	W
T_J	Junction Temperature	-65~200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.32	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}^*$	Collector-Emitter Sustaining Voltage	$I_C=100\text{mA}; I_B=0$	60		V
I_{CEO}	Collector Cutoff Current	$V_{CE}=50\text{V}; I_B=0$		1	mA
I_{CEX}	Collector-Emitter Leakage current	$V_{CE}=60\text{V}, V_{BE(OFF)}=1.5\text{V}$		0.1	mA
I_{CBO}	Collector Cutoff Current	$V_{CE}=60\text{V}; I_B=0$		50	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		0.5	mA
$V_{CE(sat)-1}^*$	Collector-Emitter Saturation Voltage	$I_C=1.5\text{A}; I_B=0.15\text{A}$		0.7	V
$V_{CE(sat)-2}^*$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=0.3\text{A}$		2.0	V
$V_{CE(sat)-3}^*$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1.25\text{A}$		4	V
$V_{BE(ON)}^*$	Base-Emitter On Voltage	$I_C=1.5\text{A}; V_{CE}=2\text{V}$		1.4	V
h_{FE-1}^*	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=2\text{V}$	40		
h_{FE-2}^*	DC Current Gain	$I_C=1.5\text{A}; V_{CE}=2\text{V}$	25	100	
h_{FE-3}^*	DC Current Gain	$I_C=3\text{A}; V_{CE}=2\text{V}$	10		
h_{FE-4}^*	DC Current Gain	$I_C=5\text{A}; V_{CE}=4\text{V}$	4		

*:Pulse test:Pulse width=300us,duty cycle \leq 2%

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