



勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

TECHNICAL DATA

NPN POWER AMPLIFIER SILICON TRANSISTOR

Qualified per MIL-PRF-19500/580

Devices

2N4234

2N4235

2N4236

Qualified Level

JAN
JANTX
JANTXV

MAXIMUM RATINGS

Ratings	Symbol	2N4234	2N4235	2N4236	Units
Collector-Emitter Voltage	V _{CEO}	40	60	80	V _{dc}
Collector-Base Voltage	V _{CBO}	40	60	80	V _{dc}
Emitter-Base Voltage	V _{EBO}	7.0			V _{dc}
Collector Current	I _C	1.0			A _{dc}
Base Current	I _B	0.5			A _{dc}
Total Power Dissipation @T _A = 25°C ⁽¹⁾	P _T	1.0			W
		6.0			
Operating & Storage Junction Temperature	T _J , T _{stg}	-65 to +200			°C

1) Derate linearly 5.7 mW/ $^{\circ}C$ for $T_A > +25^{\circ}C$

2) Derate linearly 34 mW/ $^{\circ}C$ for $T_C > +25^{\circ}C$



TO-39*
(TO-205AD)

*See appendix A for
package outline

ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}C$ unless otherwise noted)

Characteristics	Symbol	Min.	Max.	Unit
-----------------	--------	------	------	------

OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage $I_C = 100$ mAdc	2N4234	$V_{(BR)CEO}$	40	Vdc
	2N4235		60	
	2N4236		80	
Collector-Emitter Cutoff Current $V_{CE} = 30$ Vdc $V_{CE} = 40$ Vdc $V_{CE} = 60$ Vdc	2N4234	I_{CEO}	1.0	mAdc
	2N4235		1.0	
	2N4236		1.0	
Collector-Emitter Cutoff Current $V_{CE} = 40$ Vdc, $V_{BE} = 1.5$ Vdc $V_{CE} = 60$ Vdc, $V_{BE} = 1.5$ Vdc $V_{CE} = 80$ Vdc, $V_{BE} = 1.5$ Vdc	2N4234	I_{CEX}	100	η Adc
	2N4235		100	
	2N4236		100	
Collector-Base Cutoff Current $V_{CE} = 40$ Vdc $V_{CE} = 60$ Vdc $V_{CE} = 80$ Vdc	2N4234	I_{CBO}	100	η Adc
	2N4235		100	
	2N4236		100	
Emitter-Base Cutoff Current $V_{BE} = 7.0$ Vdc		I_{EBO}	0.5	mAdc

2N4234, 2N4235, 2N4236 JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽³⁾				
Forward-Current Transfer Ratio $I_C = 100 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ $I_C = 250 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ $I_C = 500 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$	h_{FE}	40 30 20	150	
Collector-Emitter Saturation Voltage $I_C = 1.0 \text{ Adc}, I_B = 100 \text{ mAdc}$ $I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$	$V_{CE(sat)}$		0.6 0.4	Vdc
Base-Emitter Saturation Voltage $I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$ $I_C = 1.0 \text{ Adc}, I_B = 100 \text{ mAdc}$	$V_{BE(sat)}$		1.1 1.5	Vdc

DYNAMIC CHARACTERISTICS

Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio $I_C = 100 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 10 \text{ MHz}$	$ h_{fe} $	3.0		
Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 100 \text{ MHz}$	C_{obo}		100	pF

SAFE OPERATING AREA

DC Tests $T_C = +25^\circ\text{C}, 1 \text{ cycle}, t \geq 0.5 \text{ s}$				
Test 1 $V_{CE} = 6.0 \text{ Vdc}, I_C = 1.0 \text{ Adc}$				
Test 2 $V_{CE} = 12 \text{ Vdc}, I_C = 500 \text{ mAdc}$				
Test 3 $V_{CE} = 30 \text{ Vdc}, I_C = 166 \text{ mAdc}$ 2N4234 $V_{CE} = 30 \text{ Vdc}, I_C = 166 \text{ mAdc}$ 2N4235 $V_{CE} = 30 \text{ Vdc}, I_C = 166 \text{ mAdc}$ 2N4236				

(3) Pulse Test: Pulse Width = 300 μ s, Duty Cycle $\leq$ 2.0%.

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.

勝 特 力 材 料 886-3-5753170
勝特力电子(上海) 86-21-54151736
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)