Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Microsemi LAWRENCE

TECHNICAL DATA

PNP HIGH POWER SILICON TRANSISTOR

Qualified per MIL-PRF-19500/461

Devices			*Qualified Level*
2N6211	**2N6212**	**2N6213**	**JAN JANTX JANTXV**

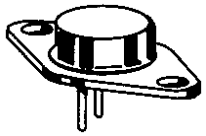
MAXIMUM RATINGS

Ratings		Symbol	2N6211	2N6212	2N6213	Unit
Collector-Emitter Voltage		V_{CEO}	225	300	350	Vdc
Collector-Base Voltage		V_{CBO}	275	350	400	Vdc
Emitter-Base Voltage		V_{EBO}	6.0			Vdc
Base Current		I_B	1.0			Adc
Collector Current		I_C	2.0			Adc
Total Power Dissipation	@ $T_A = +25^0C$ (1)	P_T	3.0			W
	@ $T_C = +25^0C$ (2)		35			W
Operating & Storage Temperature		T_{op}, T_{stg}	-55 to +200			^0C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	5.0	$^0C/W$

1) Derate linearly 17.1 mW/^{0}C for $T_A > +25^0C$
2) Derate linearly 200 mW/^{0}C for $T_C > +25^0C$



TO-66*
(TO-213AA)

*See appendix A for package outline

ELECTRICAL CHARACTERISTICS ($T_C = 25^0C$ unless otherwise noted)

Characteristics		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage					
I_C = 200 mAdc, f = 30-60 Hz	2N6211	$V_{(BR)CEO}$	225		
	2N6212		300		Vdc
	2N6213		350		
Collector-Emitter Breakdown Voltage					
I_C = 200 mAdc, f = 30-60 Hz, R_{BE} = 50 Ω	2N6211	$V_{(BR)CER}$	250		
	2N6212		325		Vdc
	2N6213		375		
Collector-Emitter Breakdown Voltage					
I_C = 200 mAdc, f = 30-60 Hz, R_{BE} = 50 Ω, V_{BE} = -1.5 Vdc		$V_{(BR)CEX}$			
	2N6211		275		Vdc
	2N6212		350		
	2N6213		400		

ELECTRICAL CHARACTERISTICS (con't)

Characteristics		Symbol	Min.	Max.	Unit
Collector-Emitter Cutoff Current V_{CE} = 150 Vdc		I_{CEO}		5.0	mAdc
Collector-Emitter Cutoff Current		I_{CEX}			mAdc
V_{CE} = 250 Vdc, V_{BE} = 1.5 Vdc	2N6211			0.5	
V_{CE} = 315 Vdc, V_{BE} = 1.5 Vdc	2N6212			0.5	
V_{CE} = 360 Vdc, V_{BE} = 1.5 Vdc	2N6213			0.5	
Collector-Base Cutoff Current		I_{CBO}			mAdc
V_{CB} = 275 Vdc	2N6211			15	
V_{CB} = 350 Vdc	2N6212			15	
V_{CB} = 400 Vdc	2N6213			15	
Emitter-Base Cutoff Current V_{EB} = 6.0 Vdc		I_{EBO}		0.5	mAdc
ON CHARACTERISTICS (3)					
Forward-Current Transfer Ratio		h_{FE}			
I_C = 1.0 Adc, V_{CE} = 2.8 Vdc	2N6211		10	100	
I_C = 1.0 Adc, V_{CE} = 3.2 Vdc	2N6212		10	100	
I_C = 1.0 Adc, V_{CE} = 4.0 Vdc	2N6213		10	100	
I_C = 1.0 Adc, V_{CE} = 5.0 Vdc	2N6211		30	175	
	2N6212		30	175	
	2N6213		30	150	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$			Vdc
I_C = 1.0 Adc, I_B = 0.125 Adc	2N6211			1.4	
	2N6212			1.6	
	2N6213			2.0	
Base-Emitter Saturation Voltage I_C = 1.0 Adc, I_B = 0.125 Adc		$V_{BE(sat)}$		1.4	Vdc
DYNAMIC CHARACTERISTICS					
Magnitude of Common Emitter Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 0.2 Adc, V_{CE} = 10 Vdc, f = 5.0 MHz		$\lvert h_{fe} \rvert$	4.0	20	
Output Capacitance V_{CB} = 10 Vdc, I_E = 0, 100 kHz ≤ f ≤ 1.0 MHz		C_{obo}		220	pF
SWITCHING CHARACTERISTICS					
Turn-On Time V_{CC} = 200 ± 10 Vdc; I_C = 1.0 Adc; I_{B1} = -0.125 Adc		t_{on}		0.6	µs
Turn-Off Time V_{CC} = 200 ± 10 Vdc; I_C = 1.0 Adc; I_{B1} = -0.125 Adc, I_{B2} = 0.125Adc		t_{off}		3.1	µs

SAFE OPERATING AREA

DC Tests

T_C = +25^{0}C, 1 Cycle, t = 1.0 s

Test 1

V_{CE} = 17.5 Vdc, I_C = 2.0 Adc — All Types

Test 2

V_{CE} = 40 Vdc, I_C = 0.875 Adc — All Types

Test 3

V_{CE} = 225 Vdc, I_C = 0.034 Adc — 2N6211

Test 4

V_{CE} = 300 Vdc, I_C = 0.02 Adc — 2N6212

Test 5

V_{CE} = 350 Vdc, I_C = 0.015 Adc — 2N6213

(3) Pulse Test: Pulse Width = 300µs, Duty Cycle ≤ 2.0%.