



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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**POWER DISCRETES**
**Description**

Quick reference data

$$V_R = 200 - 1000V$$

$$I_F = 5.0A$$

$$t_{rr} = 2\mu S$$

$$V_F = 1.0V$$

**Features**

- ◆ Low reverse leakage current
- ◆ Hermetically sealed in fused metal oxide
- ◆ Good thermal shock resistance
- ◆ Low forward voltage drop
- ◆ Avalanche capability

These products are qualified to MIL-PRF-19500/420. They can be supplied fully released as JAN, JANTX, JANTXV, and JANS versions.

**Absolute Maximum Ratings**

Electrical specifications @  $T_A = 25^\circ C$  unless otherwise specified.

	Symbol	1N5550 3SM2	1N5551 3SM4	1N5552 3SM6	1N5553 3SM8	1N5554 3SM0	Units
Working Reverse Voltage	$V_{RWM}$	200	400	600	800	1000	V
Average Forward Current @ 55°C in free air, lead length 0.375"	$I_{F(AV)}$	5.0					A
Repetitive Surge Current @ 55°C in free air, lead length 0.375"	$I_{FRM}$	25					A
Non-Repetitive Surge Current ( $t_p = 8.3mS @ V_R \text{ \& } T_{JMAX}$ ) ( $t_p = 8.3mS, @ V_R \text{ \& } 25^\circ C$ )	$I_{FSM}$	100 150					A
Storage Temperature Range	$T_{STG}$	-65 to +175					°C

## POWER DISCRETES

### Electrical Specifications

	Symbol	1N5550 3SM2	1N5551 3SM4	1N5552 3SM6	1N5553 3SM8	1N5554 3SM0	Units
Average Forward Current (sine wave) - max. $T_A = 55^\circ\text{C}$ - max. $L = 3/8"$ ; $T_L = 55^\circ\text{C}$	$I_{F(AV)}$ $I_{F(AV)}$			3.0 5.0			A
$I^2t$ for fusing ( $t = 8.3\text{mS}$ ) max	$I^2t$			42			$\text{A}^2\text{S}$
Forward Voltage Drop max. @ $I_F = 3.0\text{A}$ , $T_j = 25^\circ\text{C}$	$V_F$			1.0			V
Reverse Current max. @ $V_{RWM}$ , $T_j = 25^\circ\text{C}$ @ $V_{RWM}$ , $T_j = 125^\circ\text{C}$	$I_R$ $I_R$			1.0 60			$\mu\text{A}$
Reverse Recovery Time max. 0.5A $I_F$ to 1.0A $I_{RM}$ recovers to 0.25A $I_{RM(REC)}$	trr			2.0			$\mu\text{S}$
Junction Capacitance typ. @ $V_R = 5\text{V}$ , $f = 1\text{MHz}$	$C_j$			92			pF

### Thermal Characteristics

	Symbol	1N5550 3SM2	1N5551 3SM4	1N5552 3SM6	1N5553 3SM8	1N5554 3SM0	Units
Thermal Resistance-Junction to Lead Lead length = 0.375" Lead length = 0.0"	$R_{\theta JL}$ $R_{\theta JL}$			22 4			$^\circ\text{C/W}$
Thermal Resistance-Junction to Ambient on 0.06" thick pcb. 1 oz. copper	$R_{\theta JA}$			47			$^\circ\text{C/W}$

### Typical Characteristics

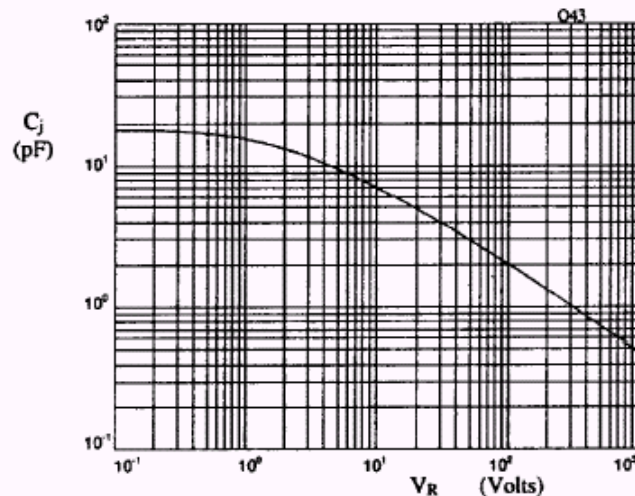


Fig 1. Typical junction capacitance as a function of reverse voltage.

POWER DISCRETES

Typical Characteristics

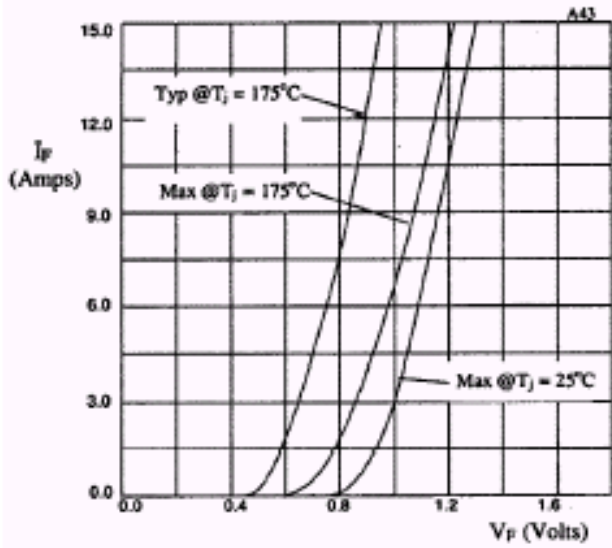


Fig 2. Forward voltage drop as a function of forward current

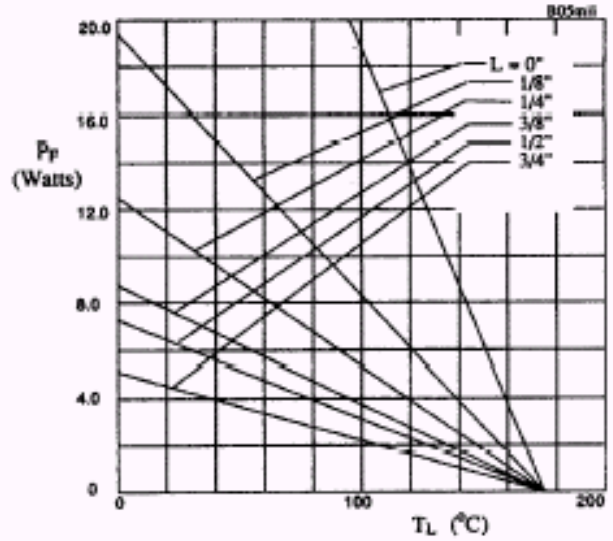


Fig 3. Maximum power versus lead temperature

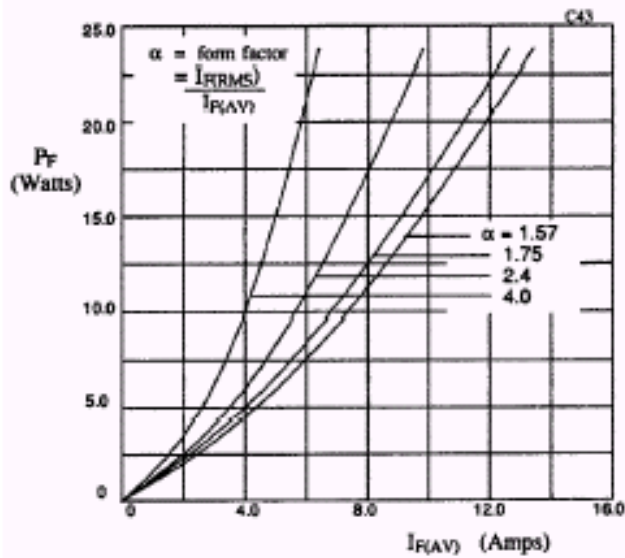


Fig 4. Forward power dissipation as a function of forward current, for sinusoidal operation.

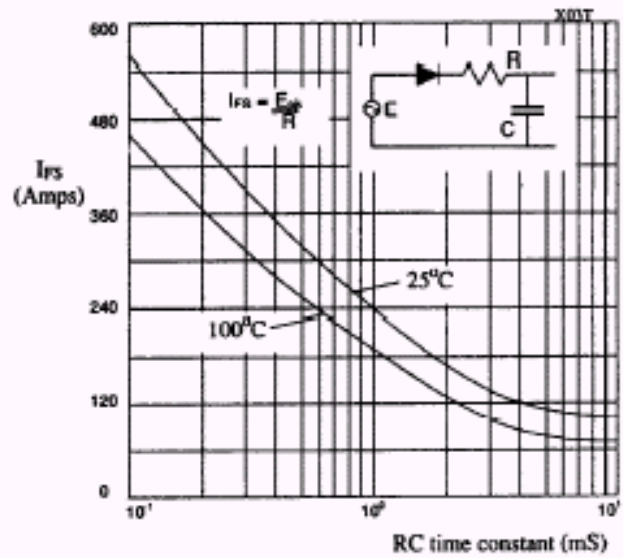


Fig 5. Maximum ratings for capacitive loads.

**POWER DISCRETES**

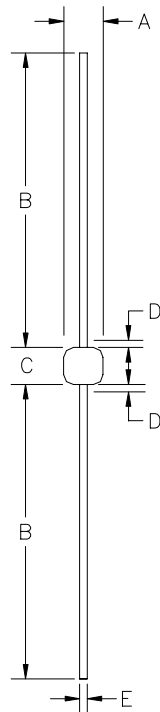
**Ordering Information**

Part Number	Description
1N5550	Axial leaded hermetically sealed <sup>(1)</sup>
1N5551	
1N5552	
1N5553	
1N5554	
3SM2	
3SM4	
3SM6	
3SM8	
3SM0	

Note:

(1) Available in bulk and tape and reel packaging. Please consult factory for quantities.

**Outline Drawing**



G4

DIM <sup>N</sup>	Dimensions				Note
	Inches		Millimeters		
	MIN	MAX	MIN	MAX	
A	0.115	0.18	2.92	4.57	-
B	0.9	1.3	22.86	33.02	-
C	0.13	0.3	3.3	7.62	-
D	-	0.03	-	0.8	1
E	0.036	0.042	0.92	1.07	-

Note:

(1) Lead diameter uncontrolled over this region.

Weight = 0.039oz

**Contact Information**

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