AS1PD, AS1PG, AS1PJ, AS1PK, AS1PM

Vishay General Semiconductor

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	TEST CO	TEST CONDITIONS		TYP.	MAX.	UNIT		
Instantaneous forward voltage	I _F = 1.0 A	T _A = 25 °C	V _F ⁽¹⁾	0.95	-	V		
		T _A = 125 °C		0.84	-			
	I _F = 1.5 A	T _A = 25 °C		0.99	1.15			
		T _A = 125 °C		0.89	1.0			
Reverse current	Rated V _R	T _A = 25 °C	I _R ⁽²⁾	0.3	5	μΑ		
		T _A = 125 °C		35	100			
Typical reverse recovery time	I _F = 0.5 A, I _R = 1.0 A, I _{rr} = 0.25 A		t _{rr}	1.5	-	μs		
Typical junction capacitance	4.0 V, 1 MHz		CJ	10.4	-	pF		

Notes

(1) Pulse test: 300 µs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T _A = 25 °c unless otherwise noted)							
PARAMETER		AS1PD	AS1PG	AS1PJ	AS1PK	AS1PM	UNIT
Typical thermal resistance	R _{0JA} (1)	115					°C/W
Typical trieffial resistance	$R_{\theta JM}$ (1)	15					

Note

⁽¹⁾ Unit mounted on PCB with 5 mm x 5 mm copper pad areas. Thermal resistance R_{BJA} - junction to ambient, R_{BJM} - junction to mount at the terminal of cathode band

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
AS1PJ-M3/84A	0.024	84A	3000	7" diameter plastic tape and reel			
AS1PJ-M3/85A	0.024	85A	10 000	13" diameter plastic tape and reel			
AS1PJHM3/84A (1)	0.024	84A	3000	7" diameter plastic tape and reel			
AS1PJHM3/85A (1)	0.024	85A	10 000	13" diameter plastic tape and reel			

Note

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

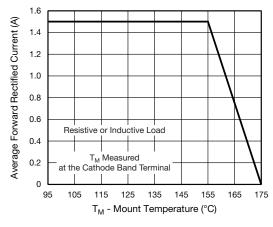


Fig. 1 - Max. Forward Current Derating Curve

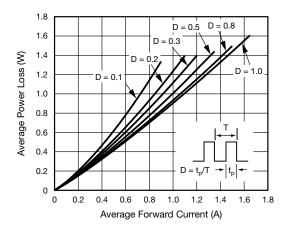


Fig. 2 - Forward Power Loss Characteristics

⁽¹⁾ AEC-Q101 qualified

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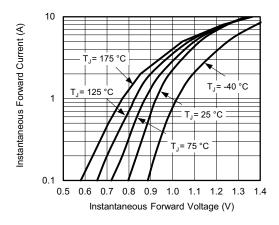


Fig. 3 - Typical Instantaneous Forward Characteristics

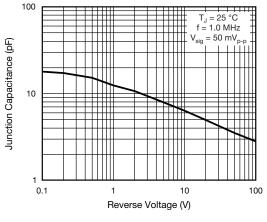


Fig. 5 - Typical Junction Capacitance

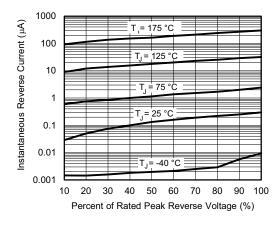


Fig. 4 - Typical Reverse Characteristics

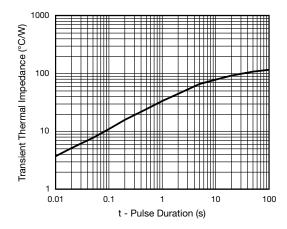


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

SMP (DO-220AA) 0.012 (0.30) REF. Cathode Band 0.086 (2.18) 0.053 (1.35) 0.036 (0.91) 0.074 (1.88) 0.041 (1.05) 0.024 (0.61) 0.142 (3.61) 0.103 (2.60) 0.032 (0.80) 0.126 (3.19) 0.087 (2.20) 0.016 (0.40) 0.158 (4.00) 0.146 (3.70) 0.025 0.030 (0.635) (0.762) 0.105 0.013 (0.35) 0.004 (0.10) 0.045 (1.15) 0.033 (0.85) 0.100 (2.54) 0.050 (1.27) 0.012 (0.30) 0.018 (0.45) 0.000 (0.00) 0.006 (0.15)



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