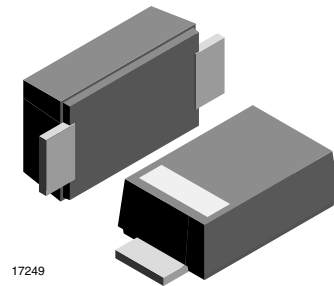


Small Signal Fast Switching Diode, High Voltage

Features

- For surface mounted applications
- Low profile package < 1 mm
- Ideal for automated placement
- Glass passivated
- High temperature soldering: 260 °C/10 s at terminals
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



Mechanical Data

Case: JEDEC DO-219AB (SMF[®]) plastic case

Polarity: band denotes cathode end

Weight: approx. 15 mg

Ordering Information/Packaging Codes

RS07K-GSxx
 GS08 = 3K per 7" reel (8 mm tape)
 GS18 = 10K per 13" reel (8 mm tape)
 Part number

RS07K-M-xx
 08 = 3K per 7" reel (8 mm tape)
 18 = 10K per 13" reel (8 mm tape)
 Environmental suffix -M- defines halogen-free
 Part number

Parts Table

Part	Ordering code	Marking	Remarks
RS07K	RS07K-GS18 or RS07K-GS08	RK	Tape and reel

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Maximum repetitive peak reverse voltage		V _{RRM}	800	V
Maximum DC blocking voltage		V _{DC}	800	V
Maximum average forward rectified current	T _{tp} = 65 °C	I _{F(AV)}	1.4	A
	T _A = 45 °C	I _{F(AV)}	0.5	A
Peak forward surge current 8.3 ms half sine-wave	T _L = 25 °C	I _{FMS}	30	A

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to tie point		R _{thJtp}	30	K/W
Thermal resistance junction to ambient air ¹⁾		R _{thJA}	180	K/W
Operating junction and storage temperature range		T _J , T _{STG}	- 55 to + 150	°C

Note:

¹⁾ Mounted on epoxy glass PCB with 3 mm x 3 mm, Cu pads (≥ 40 μm thick)

Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

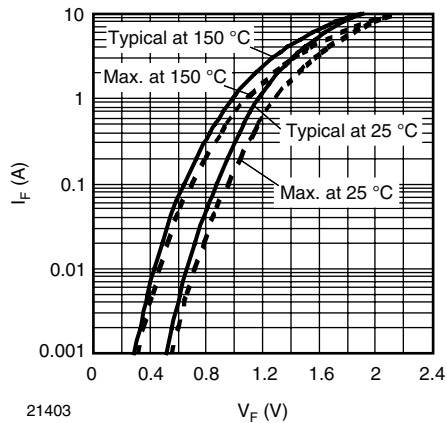
Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Maximum instantaneous forward voltage	$I_F = 1\text{ A}$ ¹⁾	V_F			1.3	V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^{\circ}\text{C}$	I_R			2	μA
	$T_A = 125\text{ }^{\circ}\text{C}$	I_R			150	μA
Reverse recovery time	$I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_r = 0.25\text{ A}$	t_{rr}			300	ns
Typical capacitance	4 V, 1 MHz	C_D		4		pF

Note:

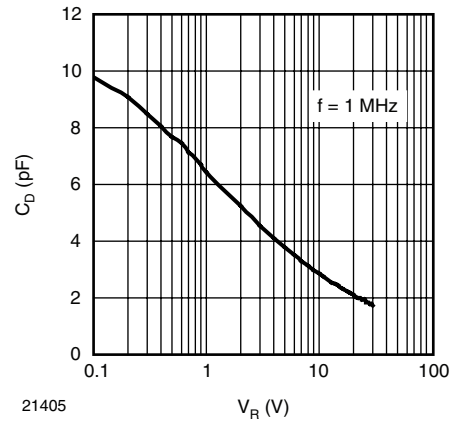
¹⁾ Pulse test, 300 μs pulse width 1 % duty cycle

Typical Characteristics

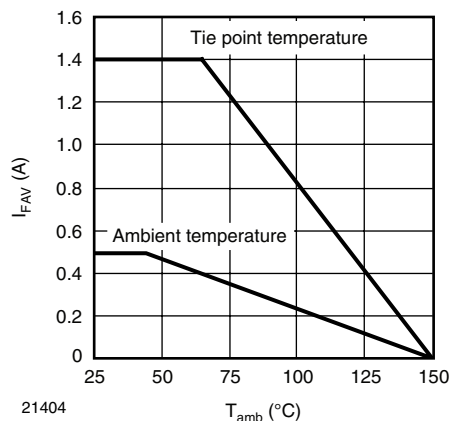
$T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified



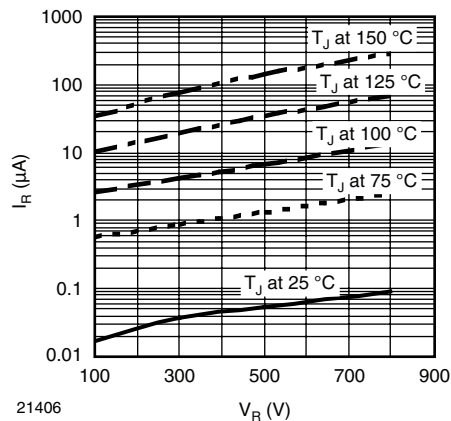
21403
Figure 1. Typical Forward Characteristics



21405
Figure 3. Typ. Diode Capacitance vs. Reverse Voltage

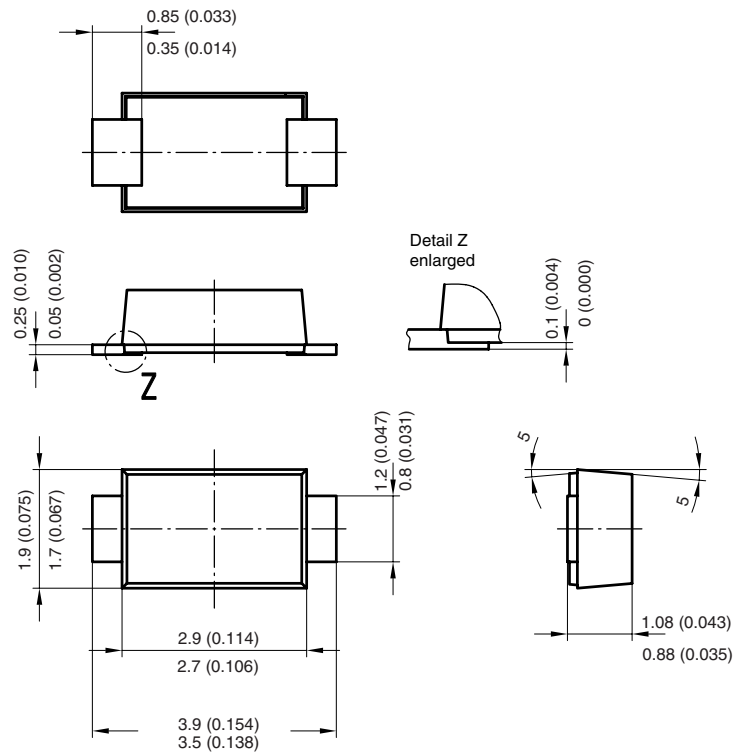


21404
Figure 2. Forward Current Derating Curve

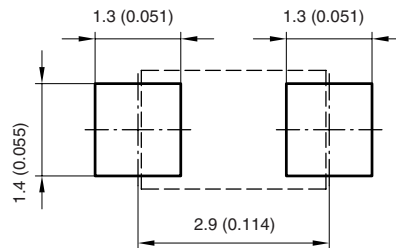


21406
Figure 4. Typical Reverse Characteristics

Package Dimensions in millimeters (inches)

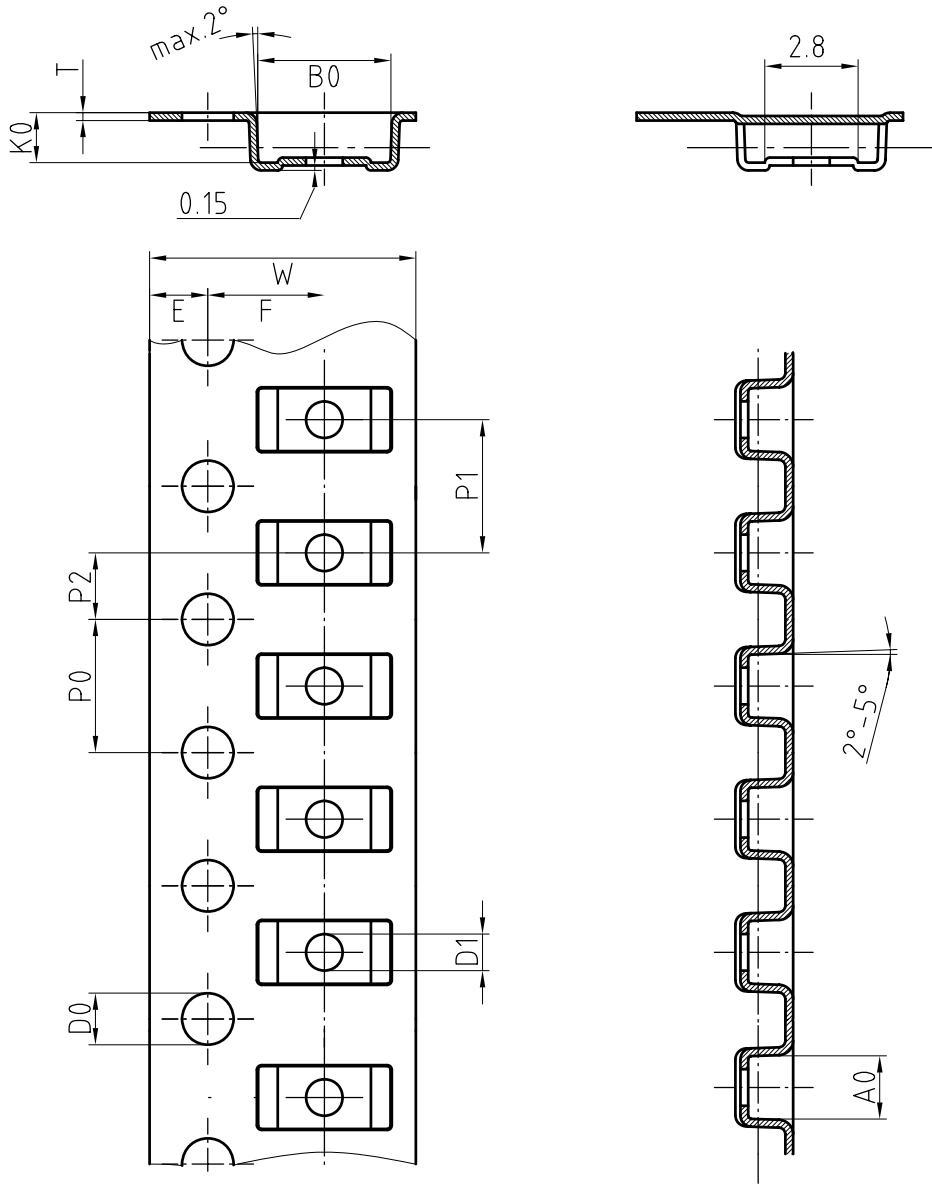


Foot print recommendation:



Created - Date: 15. February 2005
 Rev. 3 - Date: 13. March 2007
 Document no.:S8-V-3915.01-001 (4)
 17247

Blister tape for SMF Dimensions in millimeters



Mat:	A0	B0	K0	W	T	P0	P2	P1	D0	D1	E	F
PS	1.9	4.0	1.5	8.0	0.235	4.0	2.0	4.0	1.5	1	1.75	3.5

18513



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