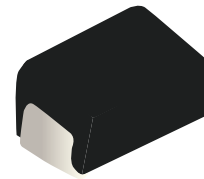


FEATURES

- Improved component design in a compact case
- High surge current capability
- Superior performance at high temperature
- SMD mountable disk varistors, suitable for lead-free reflow / wave soldering
- Meet AEC-Q200 Requirements



3225

APPLICATIONS

- Power supplies for telecommunication systems
- Protection for LED circuits
- Protection for consumer, industrial equipment
- Protection for automotive electronics

APPLICABLE STANDARDS

- UL1449
- TUV RH IEC61051-1

APPROVALS

- | | |
|-------------|------------------------------------|
| RoHS | Compliance with 2011/65/EU |
| HF | Compliance with IEC61249-2-21:2003 |

ELECTRICAL SPECIFICATION

Parameter	Symbol	Value	Unit
Maximum allowable continuous AC voltage	V_{RMS}	14.0	V
Maximum allowable continuous DC voltage	V_{DC}	18.0	V
Varistor voltage Measured	V_B	22(10%)	V
Typical capacitance value measured	C	2300	pF
Typical capacitance value tolerance		±40	%
Maximum clamping voltage measured	V_C	43	V
Maximum peak current (8/20μs)	I_P	500	A
Maximum Energy Absorption 10/1000μs	E	2.4	J
Response time	T_{rise}	<2	ns
Leakage current at V_{DC} (At initial state)	I_L	<30	μA
Leakage current at V_{DC} (After reliability Test)	I_{LA}	<100	μA
Operating ambient temperature		-40~+125	°C
Storage temperature		-40~+150	°C
Reflow temperature profile(Recommend)		260	°C

- 1*The breakdown voltage was measured at 1 mA current
 3*The surge current was tested at 8/20 μs waveform
 5*The components shall be employed within 1 year

- 2*The Clamping voltage was measured at 8*20us standard current, 3220(5A)
 4*Typical capacitance value measured at 1KHz

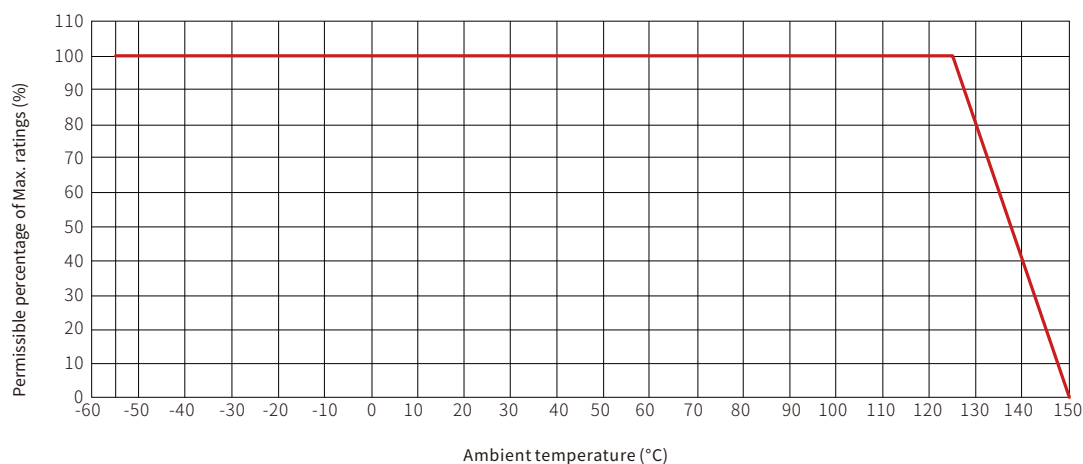
PROFILE FEATURE

Profile feature		Sn-Pb assembly	Pb-Free assembly
Average ramp-up rate (TSmax to Tp)		3°C/sec. Max	3°C/sec. Max
Preheat	-Temperature min. (Ts(min))	+100°C	+150°C
	-Temperature max.(Ts(max))	+150°C	+200°C
	-Time (tSmin to tSmax)	60-120 secs.	60-180 secs
Ts(max) to TL - Ramp-up Rate		3°C/sec. Max	3°C/sec. Max
Time maintained above	-Temperature min. (TL)	+183°C	+217°C
	-Time (tL)	60-150 secs.	60-150 secs.
Peak classification temperature (Tp)		+220°C to +240°C	+240°C to +260°C
Time within 5°C of actual peak temperature (tp)		10 secs. to 30 secs.	20 secs. to 40 secs
Ramp-down rate		6°C/sec. max.	6°C/sec. max
Time 25°C to peak temperature		6 min. max	8 min. max

Notes: All temperature refer to topside of the package, measured on the package body surface
 Maximum number of reflow cycles

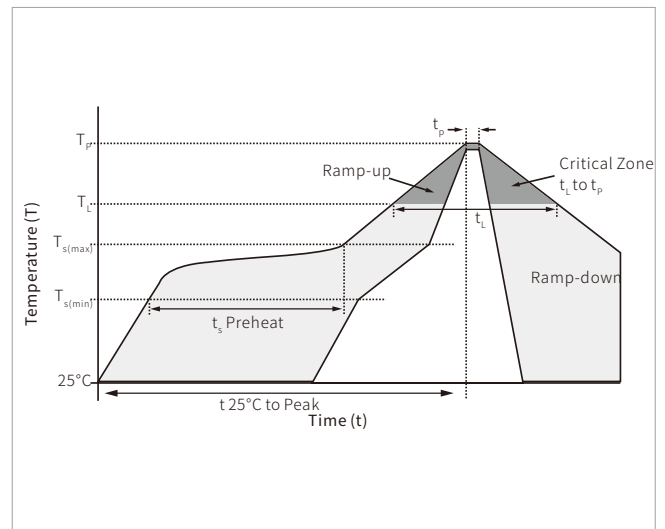
TEMPERATURE RATING CURVE

Max. current, energy, operating voltage and average power dissipation depending on ambient temperature

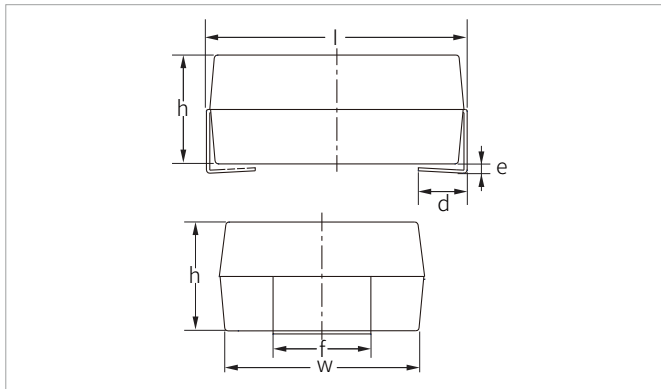


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

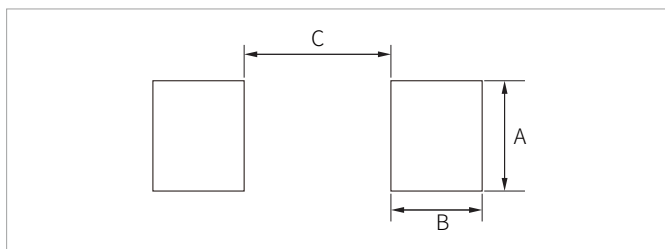


PACKAGE INFORMATION



Ref.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
l	7.80		8.60	0.307		0.339
w	6.00		6.60	0.236		0.260
h	3.30		4.00	0.130		0.157
d	1.20		1.80	0.047		0.071
e	0		0.30	0		0.012
f	2.70		3.30	0.106		0.130

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		3.50			0.138	
B		2.80			0.110	
C		4.50			0.177	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SMV3220-220H-JQ	3220	1000PCS	13"

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By QR Code

Website



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