

SMD3425 Series

SMD3425 Polymer PPTC

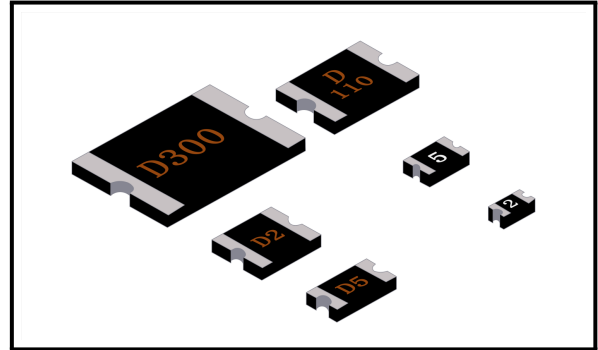
Features

- RoHS compliant and lead-free
- Halogen-free
- Fast reponse to fault current
- Symmetrical design

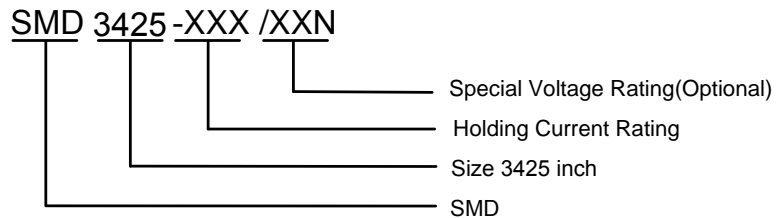
Applications

- Li-ion/Li-Polymer battery packs
- PDA'S / digital cameras
- Computer peripherals
- PC motherboards-plug and play protection

Package



Part Numbering



Environmental Specifications

Operating Temperature	-40°C to +85°C
Maximum Device Surface Temperature in Tripped State	125°C
Passive Aging	+85°C, 1000 hours; ±5% typical resistance change
Humidity Aging	+85°C, 85% R.H.100 hours; ±5% typical resistance change
Thermal Shock	MIL-STD-202, Method 107; +85°C to -40°C, 20 times; -30% typical resistance change
Solvent Resistance	MIL-STD-202, Method 215; No change
Vibration	MIL-STD-883, Method 2007, Condition A; No change
Moisture Sensivity Level	Level 1, J-STD-020
Storage Conditions	+40°C Max.70% RH Max. Packed in original packaging.





SMD3425 Series

SMD3425 Polymer PPTC

Electrical Characteristics

Part Number	Marking	I_{hold}	I_{trip}	V_{max}	I_{max}	$P_{dtyp.}$	Maximum Time To Trip		R_{0min}	R_{1max}
		(A)	(A)	(V _{dc})	(A)	(W)	Current(A)	Time(Sec.)	(ohm)	(ohm)
SMD3425-185/60N	D185	1.85	3.70	60.00	20.00	2.50	8.00	10.00	0.045	0.22
SMD3425-200/60N	D200	2.00	4.00	60.00	20.00	2.50	8.00	10.00	0.04	0.2
SMD3425-260/60N	D260	2.60	5.20	60.00	20.00	2.50	8.00	10.00	0.02	0.12
SMD3425-300/36N	D300	3.00	6.00	36.00	40.00	2.50	8.00	20.00	0.01	0.06
SMD3425-600/24N	D600	6.00	12.00	24.00	40.00	2.50	30.00	5.00	0.002	0.018
SMD3425-700/24N	D700	7.00	14.00	24.00	40.00	2.50	35.00	5.00	0.002	0.016

I_{hold} : Holding Current: maximum current at which the device will not trip in 25°C still air.

I_{trip} : Tripping Current: minimum current at which the device will trip in 25° still air.

V_{max} : Maximum voltage device can withstand without damage at rated current(I_{max}).

I_{max} : Maximum fault current device can withstand without damage at rated voltage(V_{max}).

$P_{dtyp.}$: Typical power dissipated from device when in the tripped state at 25°C still air.

R_{0min} : Minimum resistance of device in initial (un-soldered) state.

R_{1max} : Maximum resistance of device at 25°C measured one hour after tripping or reflow soldering of 260°C for 20 sec.





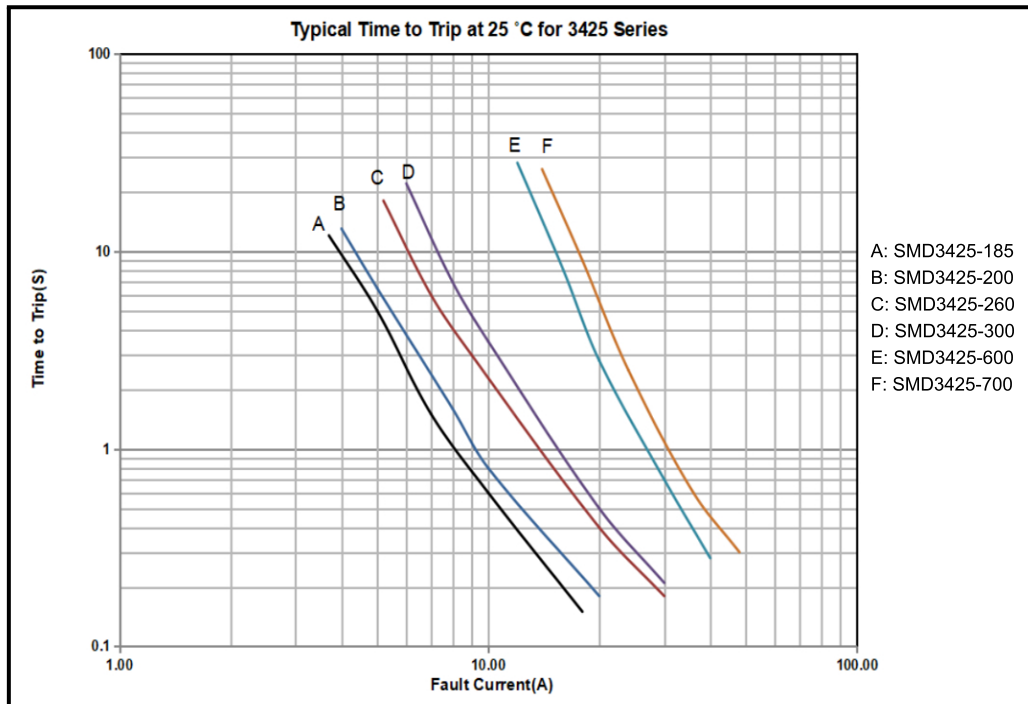
SMD3425 Series

SMD3425 Polymer PPTC

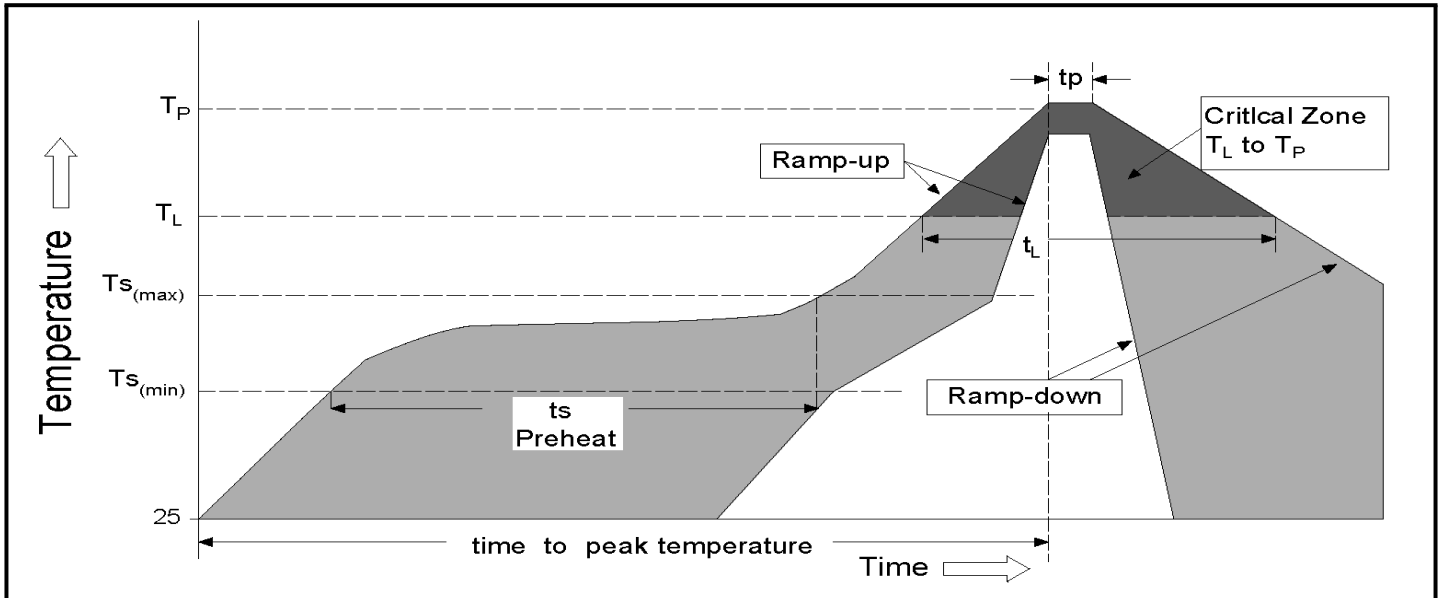
Thermal Derating Chart

Part Number	Ambient Operating Temperature								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
SMD3425-185	2.82	2.54	2.22	1.85	1.57	1.22	0.82	0.49	0.23
SMD3425-200	3.05	2.75	2.40	2.00	1.70	1.55	1.35	1.20	0.95
SMD3425-260	3.97	3.58	3.12	2.60	2.21	2.02	1.76	1.56	1.24
SMD3425-300	4.58	4.13	3.60	3.00	2.55	2.33	2.03	1.80	1.43
SMD3425-600	9.15	8.25	7.20	6.00	5.10	4.65	4.05	3.60	2.85
SMD3425-700	10.68	9.63	8.40	7.00	5.95	5.43	4.73	4.20	3.33

Typical time to trip at 25°C



Soldering Parameters



Profile Feature		Pb-Free Assembly
Average Ramp-Up Rate ($T_{S(max)}$ to T_P)		3°C/second max
Pre Heat	Temperature Min ($T_S(min)$)	150°C
	Temperature Max ($T_S(max)$)	200°C
	Time (min to max) (t_s)	60 - 180 secs
Time Maintained Above	Temperature (T_L)	217°C
	Temperature (t_L)	60 - 150 secs
Peak/Classification Temperature (T_P)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20-40 second
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_P)		8 minutes Max.

- All temperature refer to topside of thepackage, measured on the pack- age body surface
- If reflow temperature exceeds the rec- ommended profile, devices may not meet the performance requirements
- Recommended reflow methods: IR, vapor phase oven, hot air oven,,N2 en- vironment for lead
- Recommended maximum paste thick- ness is 0.25mm (0.010inch)
- Devices can be cleaned using stan- dard industry methods and solvents

Test Procedures And Requirements

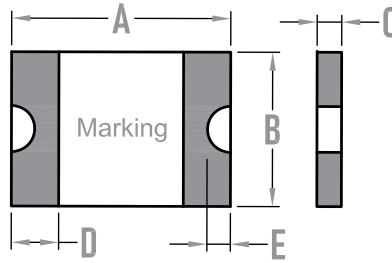
Test	Test Conditions	Accept/Reject Criteria
R0 min	Resistance measurement at 25°C	$R_{0min} \leq R \leq R_{1max}$
R1 max	Resistance measurement one hour after post trip	$R_{0min} \leq R \leq R_{1max}$
I-hold	Hold rated current 1800 second without trip, @25°C	No trip
I-trip	Device must trip within 900 second under rated current, @25°C	Trip
Max. time to trip	At specified current, 25°C	$T \leq \text{max. time to trip (seconds)}$
Trip Cycle Life	V_{max} , I_{max} , 100 cycles	No arcing or burning
Trip Endurance	V_{max} , I_{max} 24 hours	No arcing or burning
Solderability	ANSI/J-STD-002	95 % min. coverage



SMD3425 Series

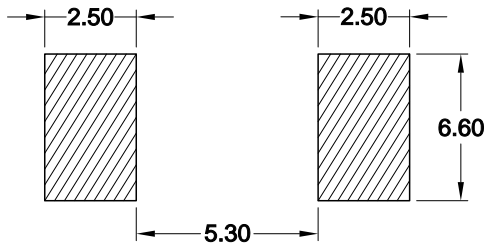
SMD3425 Polymer PPTC

Product Dimensions(mm)



Model	A		B		C		D		E	Quantity PCS/R
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
SMD3425-185/60N	8.30	9.00	6.00	6.70	1.00	1.80	0.30	1.50	0.25	1000
SMD3425-200/60N	8.30	9.00	6.00	6.70	1.00	1.80	0.30	1.50	0.25	1000
SMD3425-260/60N	8.30	9.00	6.00	6.70	1.00	1.80	0.30	1.50	0.25	1000
SMD3425-300/36N	8.30	9.00	6.00	6.70	1.00	1.80	0.30	1.50	0.25	1000
SMD3425-600/24N	8.30	9.00	6.00	6.70	1.00	1.80	0.30	1.50	0.25	1000
SMD3425-700/24N	8.30	9.00	6.00	6.70	1.00	1.80	0.30	1.50	0.25	1000

Recommended Pad Layout(mm)&Physical Specifications



Terminal Material	Tin-Plated Nickle-Copper (Solder Material: Matte Tin (Sn))
Lead Solderability	T Meets EIA Specification RS186-9E, ANSI/J-STD-002 Category 3.



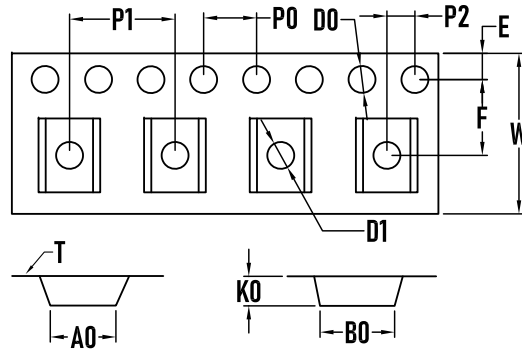


SMD3425 Series

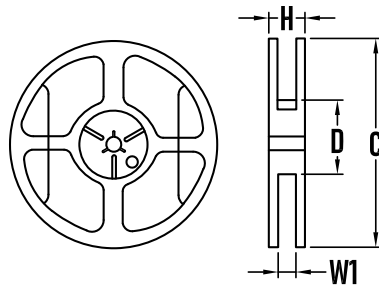
SMD3425 Polymer PPTC

Tape And Reel Specifications (mm)&Packaging quantity

item	TAPE SPECIFICATIONS: EIA-481-1 (mm)
W	16.00±0.30
F	7.50±0.10
E	1.75±0.10
D0	1.55±0.05
D1	1.50 min
P0	4.0±0.10
P1	8.0±0.10
P2	2.0±0.05
A0	6.70±0.10
B0	9.50±0.10
T	0.30±0.10
K0	1.85±0.10
Leader	390 mm
Trailer	160 mm
Quantity	1000pcs/Reel



Packaging quantity per Reel



REEL DIMENSIONS: EIA-481-1(mm)	
C	178±3.0
D	60.2±0.5
W1	17.0±0.2
H	19.5±1.0

