

Transient protection load dump

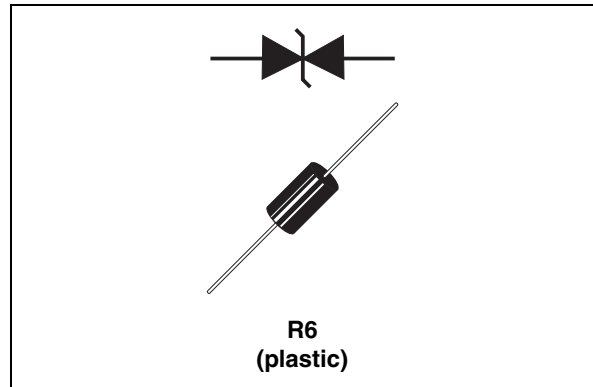
Datasheet – production data

Features

- Lead-free package
- High surge capability: 15 A / 40 ms

Description

Transient voltage suppressor diode especially useful for protecting integrated circuits, MOS hybrids and other voltage sensitive semiconductors and components.



1 Characteristics

Table 1. Absolute ratings (limiting values) $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise stated

Symbol	Parameter		Value	Unit
V_{PP}	Peak pulse load dump overvoltage	$T_{amb} = 85\text{ }^{\circ}\text{C}$	100	V
P	Power dissipation on infinite heatsink	$T_{amb} = 100\text{ }^{\circ}\text{C}$	5	W
I_{FSM}	Non repetitive surge peak forward current	$t_p = 10\text{ ms}$	200	A
T_{stg}	Storage temperature range		-65 to +175	$^{\circ}\text{C}$
T_j	Maximum operating temperature		175	$^{\circ}\text{C}$

Table 2. Thermal parameter

Symbol	Parameter	Maximum	Unit
$R_{th(j-a)}$	Junction ambient thermal resistance on infinite heatsink $L_{lead} = 10\text{ mm}$	15	$^{\circ}\text{C/W}$

Table 3. Electrical characteristics - parameter definitions ($T_{amb} = 25\text{ }^{\circ}\text{C}$)

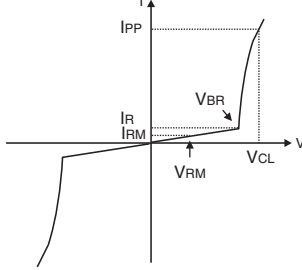
Symbol	Parameter	
V_{RM}	Stand-off voltage	
V_{BR}	Breakdown voltage	
V_{CL}	Clamping voltage	
I_{PP}	Peak pulse current	
C	Capacitance	
I_{RM}	Leakage current	

Table 4. Static parameters

Order code	$I_{RM} @ V_{RM}$ max.		$I_{RM} @ V_{RM}$ min. at $85\text{ }^{\circ}\text{C}$.		$V_{CL} @ I_{PP}$ min. ⁽¹⁾		ΔT Typ. ⁽²⁾	C Typ $V_R = 0V$ $F = 1MHz$.	$V_{BR} @ I_R$ min.	
	μA	V	μA	V	V	A	$10^{-4}/^{\circ}\text{C}$	pF	V	mA
LDP35CA	5	35	300	35	55	15	9.9	6400	36	1

1. 10/40 ms wave form

2. $\Delta V_{BR} = aT \times (T_a - 25^{\circ}\text{C}) \times V_{BR}(25^{\circ}\text{C})$

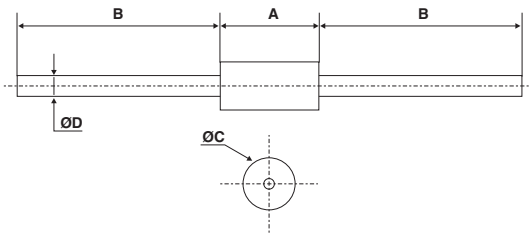
2 Package information

- Epoxy meets UL94, V0
- Lead-free package

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Table 5. R6 dimensions

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	8.6	9.1	0.338	0.358
B	25.4		1	
Ø C	8.6	9.1	0.338	0.358
Ø D	1.2	1.3	0.047	0.051



3 Ordering information

Table 6. Ordering information

Order code	Marking	Package	Weight	Base qty	Delivery mode
LDP35CARL	LDP35CA	R6	2.048 g	1000	Tape and reel

4 Revision history

Table 7. Document revision history

Date	Revision	Changes
22-Jun-2012	1	Initial release.

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