JR135V SERIES

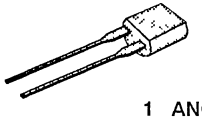
High-Voltage Current Limiting Diodes

The JR135V Series of high-voltage diodes utilizes a MOS process to provide active current limiting over a voltage range from 1 V up to 240 V. These devices feature two-terminal construction and require no additional circuitry or power supplies. Additionally, it is housed in a low-cost TO-92 package and is available with tape and reel to support automated assembly.

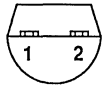
For additional design information please see performance curves VRMA, which are located in Section 7.

PART NO.	P_{OV} (V)
JR135V	135
JR170V	170
JR200V	200
JR220V	220
JR240V	240

TO-92



BOTTOM VIEW



1 ANODE
2 CATHODE

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMIT	UNITS
Peak Anode-Cathode Voltage	JR135V	P_{OV}	135	V
	JR170V		170	
	JR200V		200	
	JR220V		220	
	JR240V		240	
Reverse Current		I_R	50	mA
Power Dissipation		P_D	360	mW
Power Derating			3.27	mW/°C
Operating Junction Temperature		T_J	-55 to 135	°C
Storage Temperature		T_{stg}	-55 to 150	
Lead Temperature (1/16" from case for 10 seconds)		T_L	300	

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ELECTRICAL CHARACTERISTICS [1]							
PARAMETER	SYMBOL	TEST CONDITIONS		TYP [2]	LIMITS MIN	LIMITS MAX	UNIT
STATIC							
Peak Operating Voltage	P_{OV}	I_F = 1 mA	JR135V	165	135		V
			JR170V	190	170		
			JR200V	215	200		
			JR220V	230	220		
			JR240V	260	240		
Forward Current	I_F	V_F = 2 V		440	200		µA
		V_F = 100 V		450	200	770	
Limiting Voltage	V_L	$I_F = 0.8\, I_F$ @ 2 V min		0.7		0.9	V
DYNAMIC							
Dynamic Impedance	Z_D	V_F = 25 V		2			MΩ
Temperature Coefficient	$\frac{\Delta I_F}{\Delta T}$	V_F = 2 to 100 V T_A = −20 to 85°C		0.6			%/°C

NOTES: 1. T_A = 25 °C unless otherwise noted.
2. For design aid only, not subject to production testing.