JDS9 Series, AC Relays, 2A/250Vrms Rating

Input Characteristics

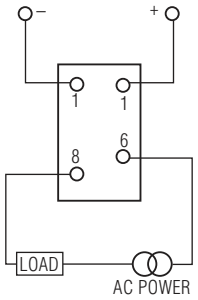
Input Voltage Range — 3.8 – 32 Vdc
Pick-up Voltage — 3.8 Vdc
Dropout Voltage — 1.5 Vdc
I/O Dielectric — 1500 Vrms

Output Characteristics

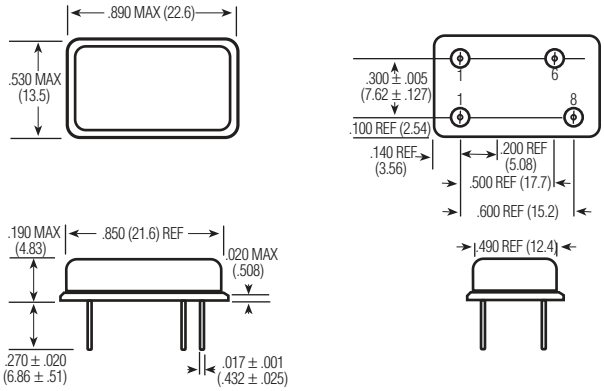
Max. Output Current (Continuous, 25°C) — 2 Arms
Max. Output Voltage — 250 Vrms
Peak Over Voltage Rating — 500 Vpk
Frequency Range — 40 – 440 Hz
Zero Switch Window — 15 Vpk
Thermal Resistance —
Junction to Ambient — 65°C/Watt
Junction to Case — 15°C/Watt

Environmental Characteristics

Shock — 1500 G's, 0.5 ms.
Vibration — 30 G's, 10 to 3000 Hz
Operating Ambient Temperature — -55 to +110°C



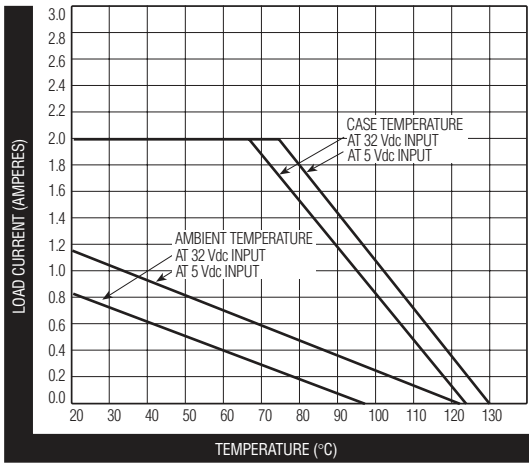
Terminal View



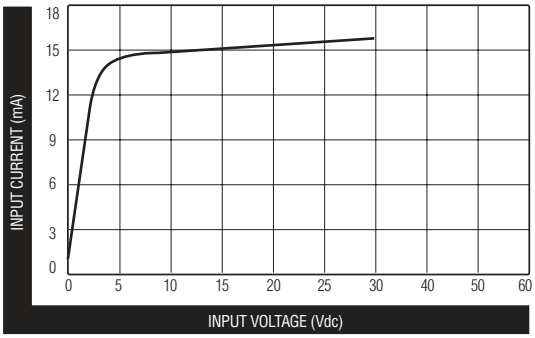
Product Facts

- Hermetically sealed
- Thick film hybrid construction
- Optically isolated
- Zero voltage turn-on
- Qualified to MIL–R–28750/9

Screening levels: Y level for high reliability applications. P/NJDS9-1Y
W level for general purpose applications. P/NS9-1W



JDS9 Max. Output Current vs. Temperature



JDS9 Typical Input Current vs. Input Voltage

JDS9 Series, AC Relays, 2A/250Vrms Rating (Continued)

Electrical Specifications (-55°C to +105°C unless otherwise specified)

Input	
Input supply voltage range (Vcc)	3.8 - 32 Vdc
Input current (max.) @ 5Vdc	15mAdc
Must turn-on voltage	3.8Vdc
Must turn-off voltage	1.5Vdc
Reverse voltage protection	-32Vdc
I/O	
Dielectric strength (min.)	1,500V rms/60 Hz.
Insulation resistance (min.) @ 500Vdc	10^9 ohms
Capacitance (max.)	10pF
Output	
Output current rating (max.)	2A rms (Fig. 2, Note 1)
Surge current (max.), 16ms @ 25°C (max.)	8A pk (Fig. 1, Note 3)
Continuous load voltage (max.)	250V rms
Transient blocking voltage (max.)	500V pk
Frequency range	40 - 440 Hz.
Output voltage drop (max.) @ 1A load current	1.5V rms
Off-state leakage current (max.) @ 250V rms/400 Hz.	1mA rms
Turn-on time (max.)	1/2 cycle
Turn-off time (max.)	1 cycle
Off-state dv/dt (min.), with snubber	200V /µs (Note 2)
Zero voltage turn-on window (max.)	10V
Wave distortion (max.)	4V rms
Output chip junction temperature (max.)	130°C
Thermal resistance (max.), junction to ambient	65°C/W
Thermal resistance (max.), junction to case	15°C/W

Notes

1. Operation at elevated load currents up to 2 amps is dependent on the use of suitable heatsink to maintain case temperature.
2. Recommended output snubber: R = 100 ohms (1/2 W), C = .01µF (600V).
3. Heating of output chip during and after a surge may cause loss of output blocking capability until junction temperature falls below maximum rating.