

MTD3055VL

Preferred Device

Power MOSFET 12 Amps, 60 Volts N-Channel DPAK

This Power MOSFET is designed to withstand high energy in the avalanche and commutation modes. Designed for low voltage, high speed switching applications in power supplies, converters and power motor controls, these devices are particularly well suited for bridge circuits where diode speed and commutating safe operating areas are critical and offer additional safety margin against unexpected voltage transients.

- Avalanche Energy Specified
- I_{DSS} and $V_{DS(on)}$ Specified at Elevated Temperature

MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	Vdc
Drain-Gate Voltage ($R_{GS} = 1.0\text{ M}\Omega$)	V_{DGR}	60	Vdc
Gate-Source Voltage	V_{GS}	± 15	Vdc
- Continuous	V_{GSM}	± 20	Vpk
- Single Pulse ($t_p \leq 50\text{ ms}$)			
Drain Current - Continuous @ 25°C	I_D	12	Adc
- Continuous @ 100°C	I_D	8.0	
- Single Pulse ($t_p \leq 10\ \mu\text{s}$)	I_{DM}	42	Apk
Total Power Dissipation @ 25°C	P_D	48	Watts
Derate above 25°C		0.32	W/ $^\circ\text{C}$
Total Power Dissipation @ $T_A = 25^\circ\text{C}$, when mounted to minimum recommended pad size		1.75	Watts
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to 175	$^\circ\text{C}$
Single Pulse Drain-to-Source Avalanche Energy - Starting $T_J = 25^\circ\text{C}$ ($V_{DD} = 25\text{ Vdc}$, $V_{GS} = 5.0\text{ Vdc}$, $I_L = 12\text{ Apk}$, $L = 1.0\text{ mH}$, $R_G = 25\ \Omega$)	EAS	72	mJ
Thermal Resistance			$^\circ\text{C/W}$
- Junction to Case	$R_{\theta JC}$	3.13	
- Junction to Ambient	$R_{\theta JA}$	100	
- Junction to Ambient, when mounted to minimum recommended pad size	$R_{\theta JA}$	71.4	
Maximum Temperature for Soldering Purposes, 1/8" from case for 10 seconds	T_L	260	$^\circ\text{C}$



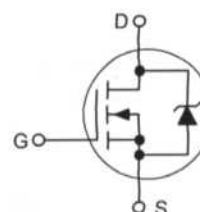
ON Semiconductor

<http://onsemi.com>

12 AMPERES
60 VOLTS

$R_{DS(on)} = 180\text{ m}\Omega$

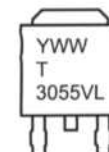
N-Channel



MARKING
DIAGRAM

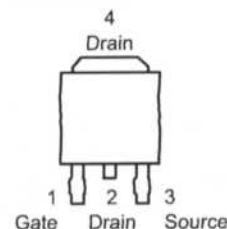


CASE 369A
DPAK
STYLE 2



Y = Year
WW = Work Week
T = MOSFET

PIN ASSIGNMENT



ORDERING INFORMATION

Device	Package	Shipping
MTD3055VL	DPAK	75 Units/Rail
MTD3055VL1	DPAK	75 Units/Rail
MTD3055VLT4	DPAK	2500 Tape & Reel

Preferred devices are recommended choices for future use and best overall value.