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UPFS120P

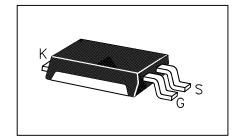
Features

- **POWERMITE 3 Surface Mount Package**
- MOSFET with Schottky Rectifier for reverse voltage blocking
- Single 3 leaded device replaces 2 individual components
- **Integral Heat Sink / Locking Tabs**
- Supplied in 16mm Tape and Reel 6000 units/reel
- Superior Low Thermal and Electrical capability

Mechanical Characteristics

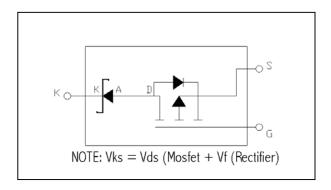
- Footprint Area of 16.51 mm²
- Case: Molded Epoxy Meets UL94VO at 1/8 inch Weight: 72 milligrams
- Lead and Mounting Temperatures: 260°C max for 10 seconds

SURFACE MOUNT P - CHANNEL MOSKEY ®



Description

The MOSKEY® combines a MOSFET with a Schottky Rectifier to provide reverse blocking capability in a single three leaded package. This device is well suited for applications such as battery chargers and switching where the intrinsic source-drain diode is an undesirable feature.



Absolute Maximum Ratings at 25°C

RATING	SYMBOL	VALUE	UNIT
Cathode-to-Source Voltage	VKSS	+/- 20	Vdc
Gate-to-Source Voltage	VGS	+/- 10	Vdc
Cathode Current:			
Continuous @ TA=25°C	IK	1.0	Adc
Single Pulsed	IKM	6.0	Apk
Total Power Dissipation	PD (1)	1.9	Watts
Storage Temperature	T stg	-55 to 150°C	°C
Operating Temperature	T op	-55 to 150°C	°C

Thermal Characteristics

Thermal Resistance:

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Junction to Tab	Rjtab	20	°C/Watt
(1)Junction-to-ambient	Rja (1)	65	°C/Watt
(2)Junction-to-ambient	Ria (2)	150	°C/Watt

- (1) Mounted on 2" square by 0.06' thick FR4 board with a 1" x1" square 2 ounce copper pattern.
- (2) Mounted on 0.06 thick FR4 board, using recommended footprint.





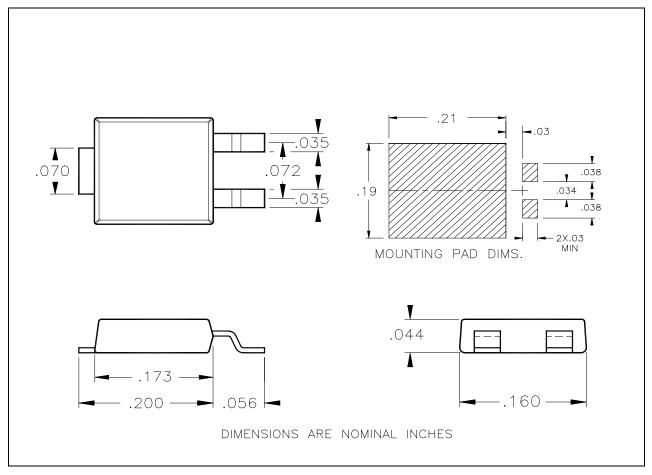
PRELIMINARY

Electrical Characteristics at 25°C

ELECTRIC	CAL CHARACTERISTICS (TA = 25°C u	nless otherwise noted)				
Symbol	Parameter	Conditions	Min	Тур	Max	Units
	OFF CHARACTERISTICS					
BVKSS	Cathode-Source Breakdown Voltage	VGS= 0V; IK = 250uA				V
IKSSF	Zero Gate Voltage Cathode Current: Forward	VKS= -16V, VGS = 0V			1	uA
IKSSR	Zero Gate Voltage Cathode Current:Reverse	VKS= +16V, VGS = 0V			1	mA
IGSS	Gate-Body Leakage Current	VGS= +/- 8V, VKS = 0V			100	nA
ON	CHARACTERISTICS (pulsed 500us m	ax, duty cycle < 2%)				
VGS(TH)	•	VKS ≥ VGS; IK = 250uA	1	1.9	3	٧
DELTA VGS(TH)/ TJ	Gate Threshold Voltage Temp Coefficient	IK = 250uA, Reference to 25°C		3.5		mV/°C
VKS (ON)	Static Cathode-Source On Voltage	VGS = 4.5 V; IK = 1A			750	mV
VKS (ON)	Static Cathode-Source On Voltage	VGS = 4.5 ; IK = 0.5A			550	mV
IK(ON)	On State Cathode Current	VGS = 4.5 V; VKS = 5V	3			Α
Gfs	Forward Transconductance	VDS = 5V; IK = 0.5A		3		S
DY	NAMIC CHARACTERISTICS					
Ciss	Input Capacitance	VKS = 15 V; VGS = 0V, F = 1MHz		165		рF
Coss	Output Capacitance	VKS = 15 V; VGS = 0V, F = 1MHz		60		рF
Crss	Reverse Transfer Capacitance	VKS = 15 V; VGS = 0V, F = 1MHz		25		рF
SW	ITCHING CHARACTERISTICS					
Td(ON)	Turn On Delay Time	VDD = 15V, IK = 1A, VGS = 10V, Rg = 6 Ω		8	20	ns
Tr	Turn On Rise Time	VDD = 15V, IK = 1A, VGS = 10V, Rg = 6 Ω		9	20	ns
Td(OFF)	Turn Off Delay time	VDD = 15V, IK = 1A, VGS = 10V, Rg = 6 Ω		14	30	ns
Tf	Turn Off Fall time	VDD = 15V, IK = 1A, VGS = 10V, Rg = 6 Ω		2	10	ns
Qg	Total Gate Charge	VDS = 15V, IK = 1A, VGS = 10V		3.5	5	nC
Qgs	Gate-Source Charge	VDS = 15V, IK = 1A, VGS = 10V		0.6		nC
Qgd	Gate-Cathode Charge	VDS = 15V, IK = 1A, VGS = 10V		0.8		nC



PRELIMINARY



MECHANICAL SPECIFICATIONS