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Part Number	US1K
product family	ULTRA FAST RECOVERY RECTIFIERS
package type	DO-214AC
VRM(PRV)	800V
Ifsm	30A
IF(AV)	1.0A
@Vf	1.7V
@If	1.0A
Trr	100nS
IR	10μA
@VR	800V
Package Qty	Tape : 5K/Reel, 80K/Ctn;

This product is listed under the following categories where you may find similar products:  
[Diodes](#)  
[Ultra Fast Recovery Rectifiers](#)



Micro Commercial Components

# US1A THRU US1M

## 1 Amp Ultra Fast Rectifier 50 to 1000 Volts

### Features

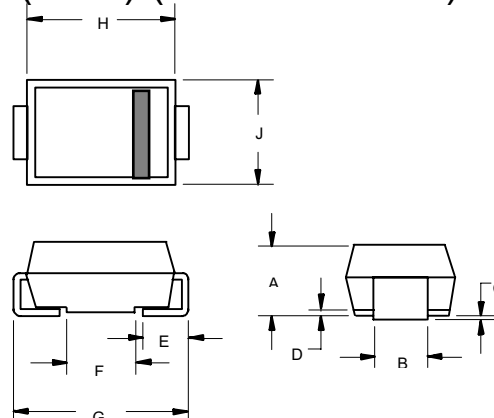
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Glass Passivated Chip
- Ultra Fast Switching For High Efficiency
- For Surface Mounted Applications
- Low Forward Voltage Drop And High Current Capability
- Low Reverse Leakage Current
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

### Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

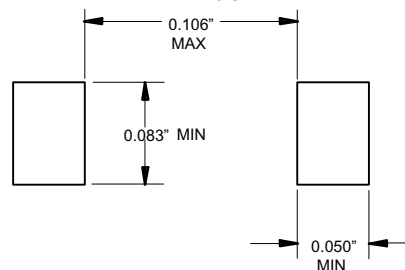
MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
US1A	US1A	50V	35V	50V
US1B	US1B	100V	70V	100V
US1C	US1C	150V	105V	150V
US1D	US1D	200V	140V	200V
US1G	US1G	400V	280V	400V
US1J	US1J	600V	420V	600V
US1K	US1K	800V	560V	800V
US1M	US1M	1000V	700V	1000V

### DO-214AC (SMA) (LEAD FRAME)



DIM	INCHES				NOTE
	MIN	MAX	MIN	MAX	
A	.079	.096	2.00	2.44	
B	.050	.064	1.27	1.63	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.189	.220	4.80	5.59	
H	.157	.181	4.00	4.60	
J	.090	.115	2.25	2.92	

### SUGGESTED SOLDER PAD LAYOUT



### Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_L = 75^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage US1A-1D US1G US1J-1M	$V_F$	1.0V 1.4V 1.7V	$I_{FM} = 1.0A$ ; $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10uA 100uA	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$
Maximum Reverse Recovery Time US1A-1G US1J-1M	$T_{rr}$	50ns 100ns	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$
Typical Junction Capacitance US1A-1G US1J-1M	$C_J$	20pF 17pF	Measured at 1.0MHz, $V_R=4.0V$

\*Pulse test: Pulse width 300 sec, Duty cycle 1%

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.



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## Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;5Kpcs/Reel

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