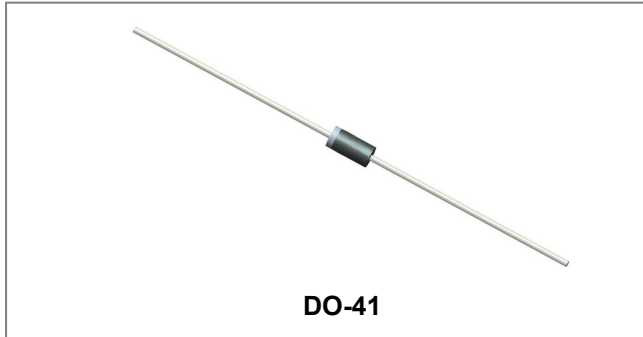


## 11DQ05/11DQ06 SCHOTTKY RECTIFIER



### Features

- Low profile, axial leaded outline
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Very Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	50(11DQ05) 60(11DQ06)	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 84^\circ\text{C}$ , rectangular wave form On PC board 9mm <sup>2</sup> island	1.1	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	30	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 1 A, Pulse, $T_J = 25^\circ\text{C}$ @ 2 A, Pulse, $T_J = 25^\circ\text{C}$	0.54 0.67	0.58 0.76	V
	$V_{F2}$	@ 1 A, Pulse, $T_J = 125^\circ\text{C}$ @ 2 A, Pulse, $T_J = 125^\circ\text{C}$	0.48 0.6	0.53 0.64	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 25^\circ\text{C}$	0.01	1	mA
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 125^\circ\text{C}$	5	11	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	45	55	PF
Typical Series Inductance	$L_S$	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	$dv/dt$	-	-	10,000	V/ $\mu\text{s}$

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

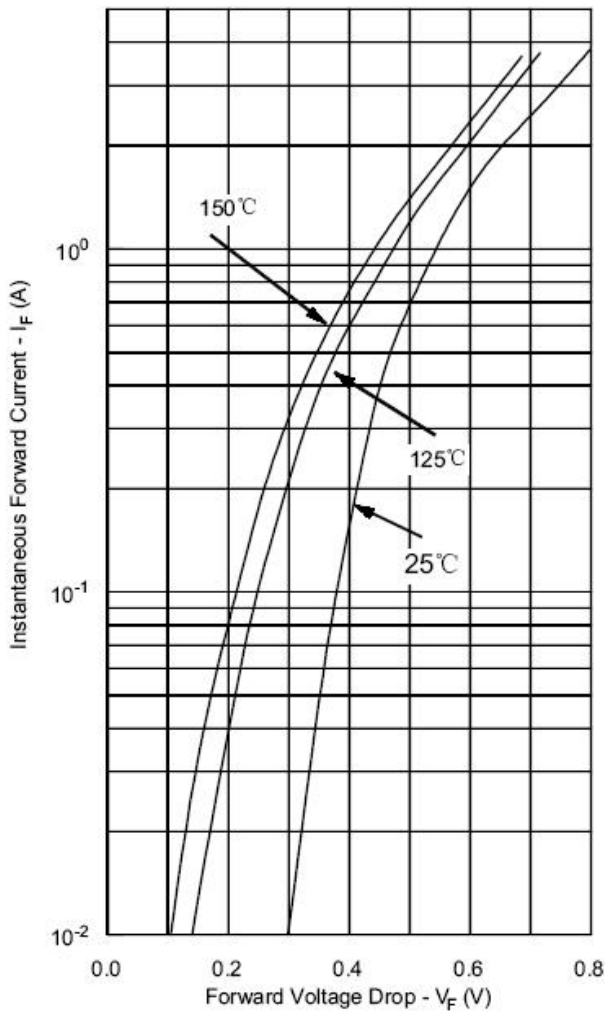
- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

**Thermal-Mechanical Specifications:**

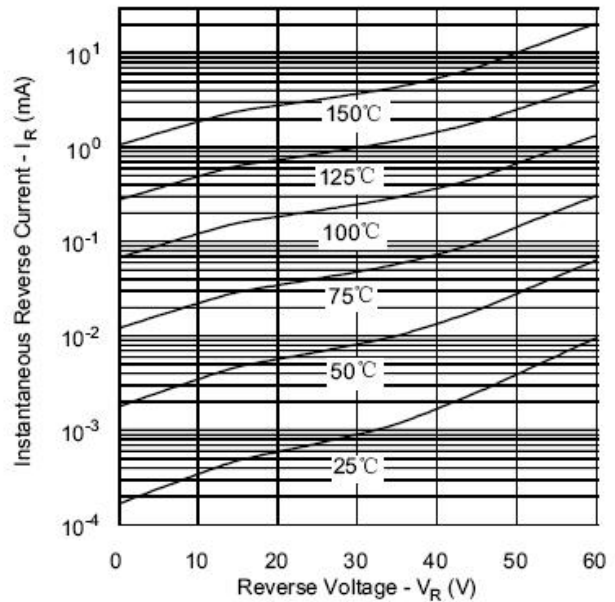
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-40 to +150	$^{\circ}\text{C}$
Storage Temperature	$T_{\text{stg}}$	-	-40 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta\text{JA}}$	-	100	$^{\circ}\text{C}/\text{W}$
Typical Thermal Resistance Junction to Lead	$R_{\theta\text{JL}}$	-	81	$^{\circ}\text{C}/\text{W}$
Approximate Weight	wt	-	0.34	g

**Ratings and Characteristics Curves**

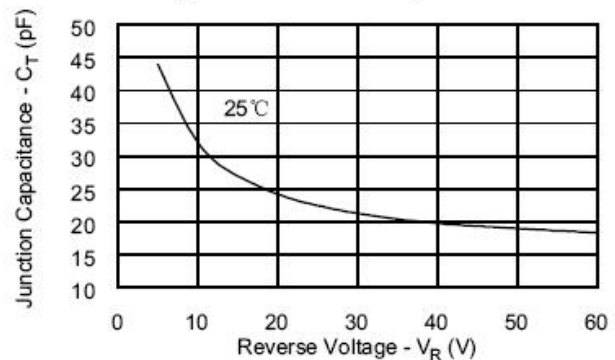
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**



### Mechanical Dimensions DO-41



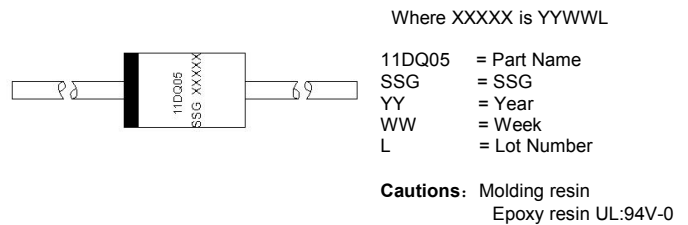
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	4.06	5.21	0.160	0.205
C	0.71	0.864	0.028	0.034
D	2.00	2.72	0.079	0.107

### Ordering Information

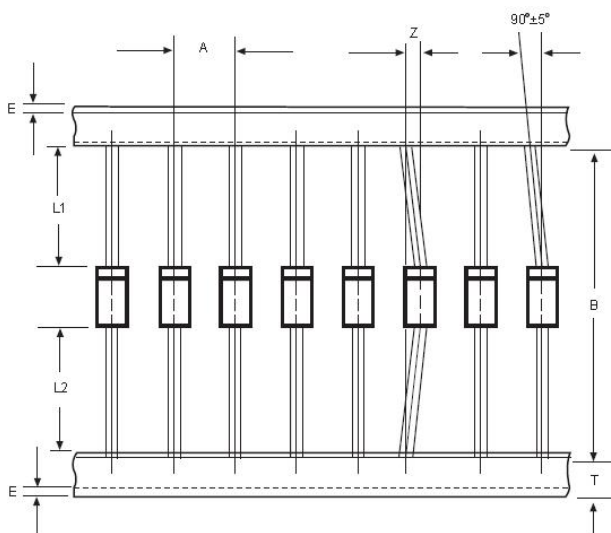
Device	Package	Shipping
11DQ05 11DQ06	DO-41 (Pb-Free)	5000pcs /reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

### Marking Diagram



### Carrier Tape Specification DO-41



SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

**Technical Data**  
**Data Sheet N0653, Rev. A**



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