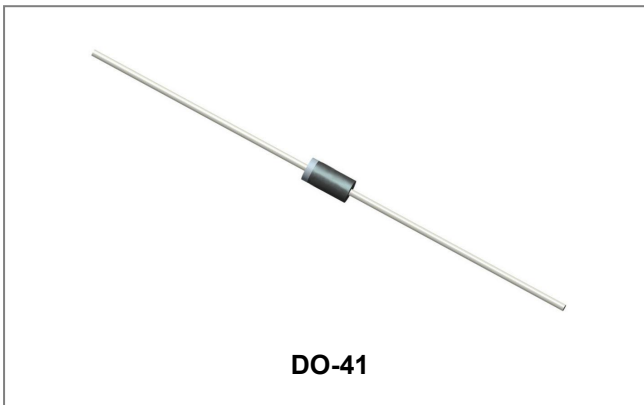


## 10DQ03 THRU 10DQ06 SCHOTTKY RECTIFIER



### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Green Products in Compliance with the RoHS Directive
- Terminals finish: 100% Pure Tin
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012 ounce, 0.34 grams

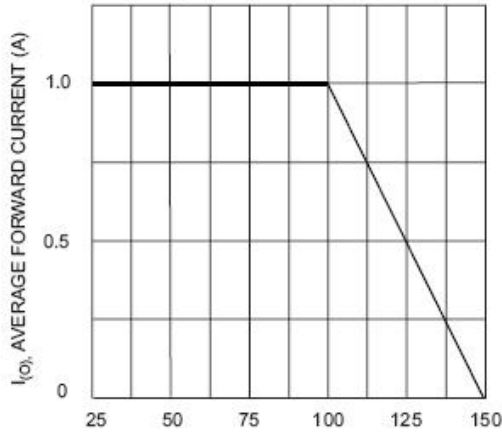
### Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristics	Symbol	10DQ03	10DQ04	10DQ05	10DQ06	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	30	40	50	60	V
Maximum DC blocking voltage	$V_{DC}$					
Maximum RMS voltage	$V_{RMS}$	21	28	35	42	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=100^{\circ}\text{C}$	$I_{(AV)}$	1.0				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load ( JEDEC Method)	$I_{FSM}$	40				A
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.55		0.70		V
Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=100^{\circ}\text{C}$	$I_R$		0.5	10		mA
Typical junction capacitance ( Note 1)	$C_J$	110		80		pF
Typical thermal resistance junction to lead	$R_{\theta JL}$	15				$^{\circ}\text{C}/\text{W}$
Typical thermal resistance junction to ambient( Note 2)	$R_{\theta JA}$	50.0				$^{\circ}\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +125				$^{\circ}\text{C}$

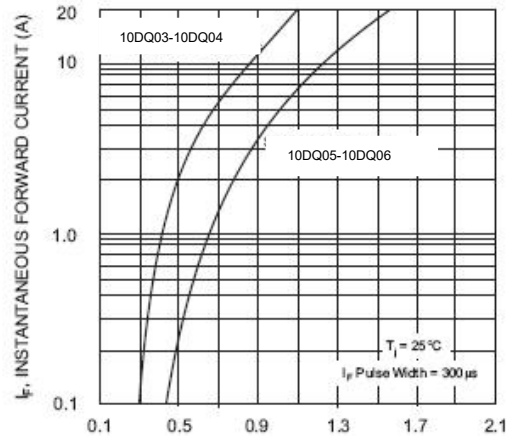
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B mounted.

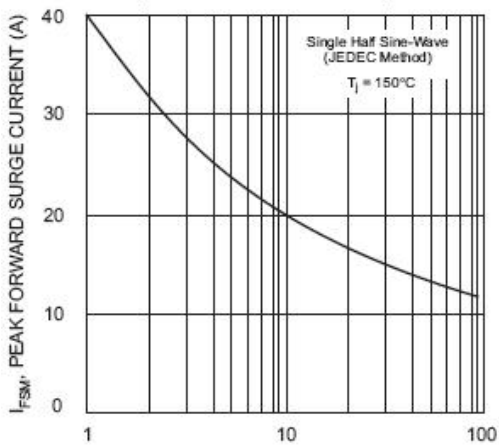
**Ratings and Characteristics Curves**



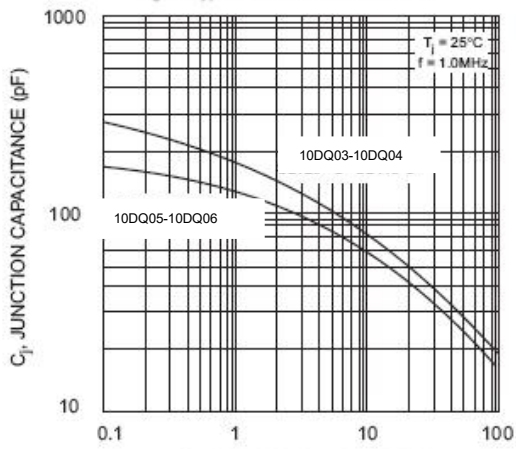
$T_L$ , LEAD TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



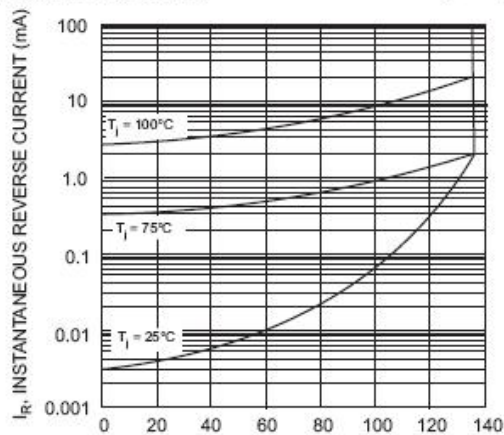
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

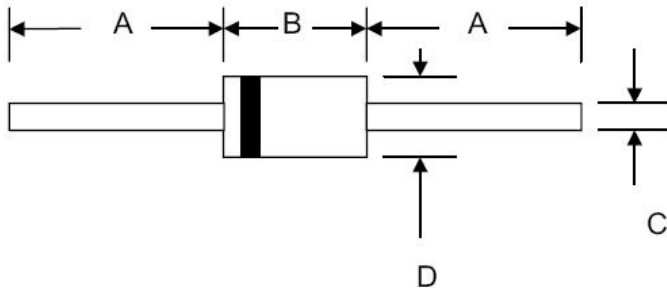


$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Junction Capacitance



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 5 Typical Reverse Characteristics

**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
10DQ03 THRU 10DQ06	DO-41(Pb-Free)	5000pcs / tape

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

**Marking Diagram**

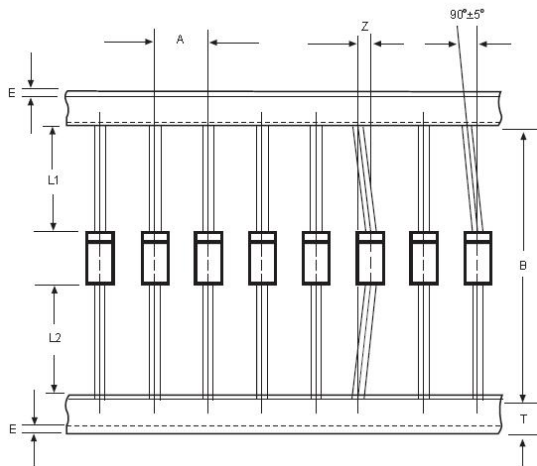


Where XXXXX is YYWWL

10DQ03 = Part Name  
SSG = SSG  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**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

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