

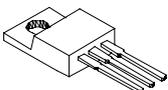
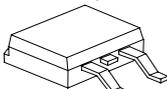
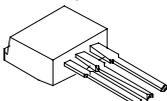
25CTQ.../25CTQ...S/25CTQ...-1 SCHOTTKY RECTIFIER

Applications:

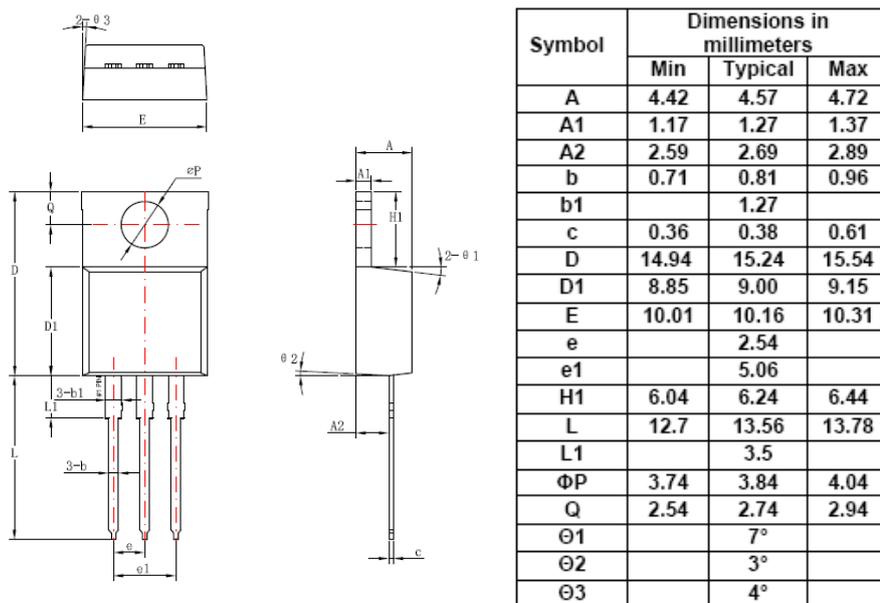
- Switching power supply • Free-Wheeling diodes • Reverse battery protection
- Converters

Features:

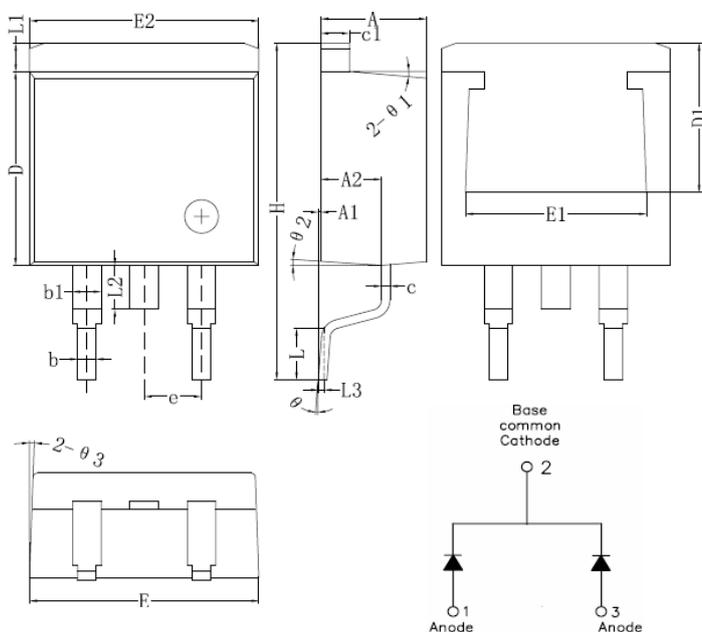
- 150 °C T_J operation
- Center tap configuration
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green Products in Compliance with the RoHS Directive
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Case styles		
<p>25CTQ...</p>  <p>TO-220AB</p>	<p>25CTQ...S</p>  <p>D²PAK</p>	<p>25CTQ...-1</p>  <p>TO-262</p>

Mechanical Dimensions: In Inches / mm

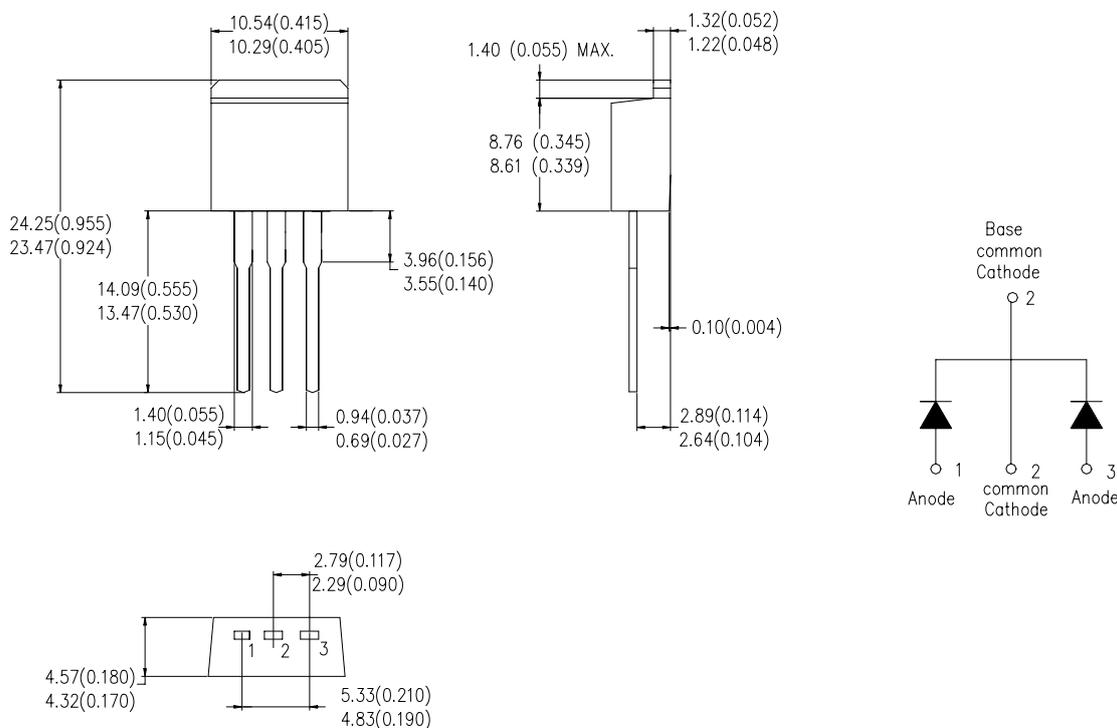


TO-220AB



Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40
L2			2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

D²PAK

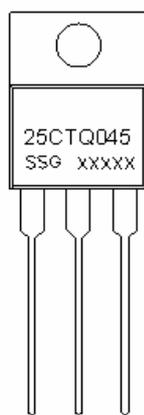


TO-262

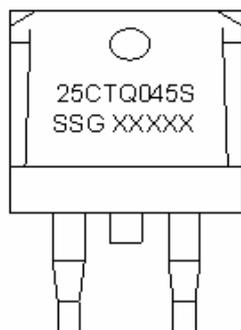
Technical Data
Data Sheet N0024, Rev. -

Green Products

Marking Diagram:



25CTQ045



25CTQ045S

Where XXXXX is YYWWL

25CTQ045 = Part Name
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
25CTQ045	TO-220AB (Pb-Free)	50pcs / tube
25CTQ045S	D ² PAK (Pb-Free)	800pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	35(25CTQ035) 40(25CTQ040) 45(25CTQ045)	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_C=102^{\circ}C$, rectangular wave form	30	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	300	A

Electrical Characteristics:

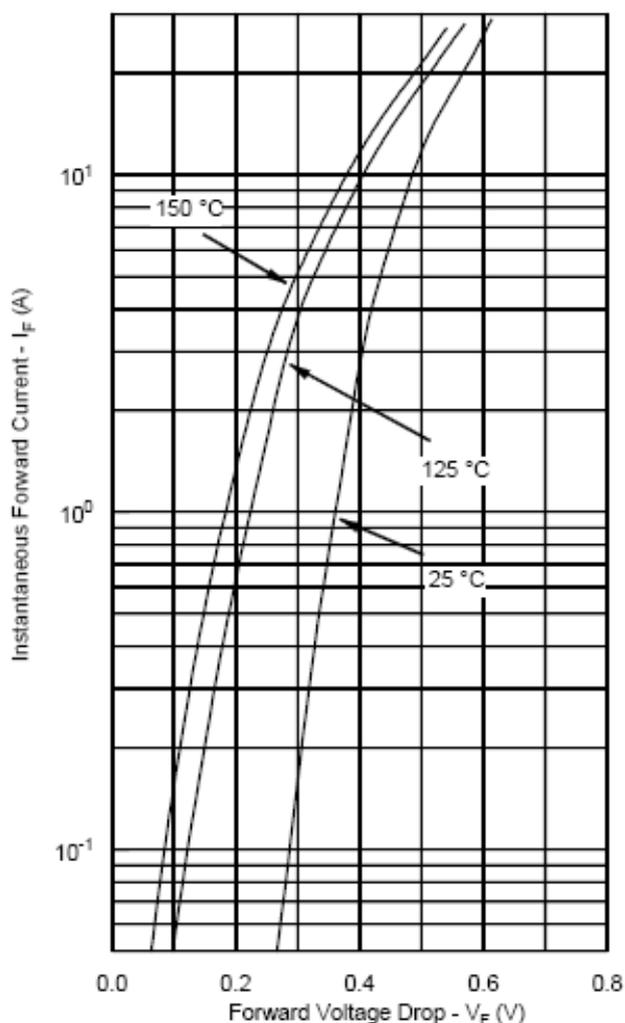
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@ 15A, Pulse, $T_J = 25^{\circ}C$ @ 30A, Pulse, $T_J = 25^{\circ}C$	0.56 0.71	V
	V_{F2}	@ 15A, Pulse, $T_J = 125^{\circ}C$ @ 30A, Pulse, $T_J = 125^{\circ}C$	0.50 0.64	V
Max. Reverse Current at DC condition	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^{\circ}C$	1.0	mA
Max. Reverse Current	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^{\circ}C$	70	mA
Max. Junction Capacitance	C_T	@ $V_R = 5V$, $T_C = 25^{\circ}C$ $f_{SIG} = 1MHz$	900	pF
Typical Series Inductance	L_S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change(Rated V_R)	dv/dt	-	10,000	V/ μs

* Pulse Width < 300 μs , Duty Cycle <2%

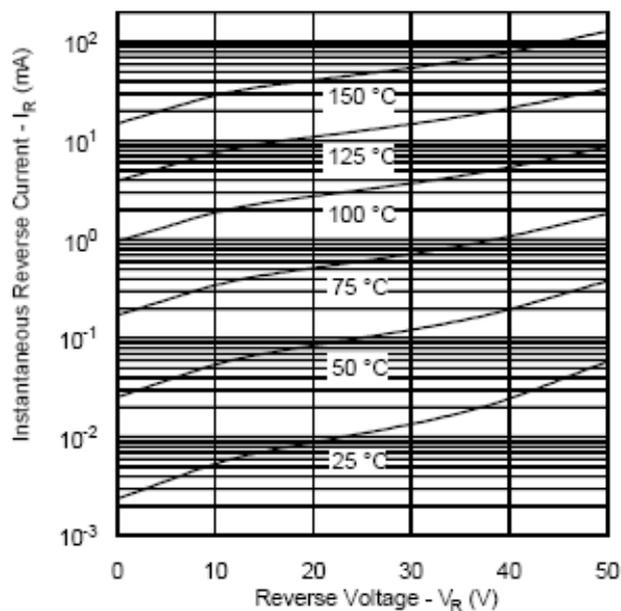
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-55 to +150	$^{\circ}C$
Max. Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}C$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	3.25	$^{\circ}C/W$
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.50	$^{\circ}C/W$
Approximate Weight	wt	-	2	g
Case Style	TO-220AB, D ² PAK, TO-262 (Suffix "s" for D ² PAK; Suffix "-1" for TO-262)			

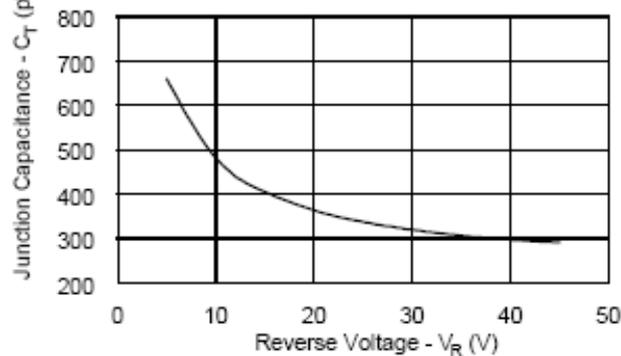
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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