NTSV20100CT

Very Low Forward Voltage **Trench-based Schottky Rectifier**

Exceptionally Low $V_F = 0.50$ V at $I_F = 5$ A

Features

- Fine Lithography Trench-based Schottky Technology for Very Low Forward Voltage and Low Leakage
- Fast Switching with Exceptional Temperature Stability
- Low Power Loss and Lower Operating Temperature
- Higher Efficiency for Achieving Regulatory Compliance
- Low Thermal Resistance
- High Surge Capability
- This Device is Pb-Free, Halogen Free/BFR Free and is RoHS Compliant

Typical Applications

- Switching Power Supplies including Notebook/Netbook Adapters. ATX and Flat Panel Display
- High Frequency and DC-DC Converters
- Freewheeling and OR-ing Diodes
- Reverse Battery Protection
- Instrumentation

Mechanical Characteristics

- Case: Epoxy, Molded
- Epoxy Meets Flammability Rating UL 94-0 @ 0.125 in
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead Temperature for Soldering Purposes: 260°C Maximum for 10 sec

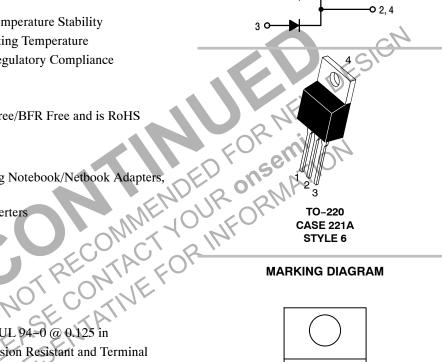


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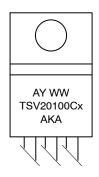
http://onsemi.com

PIN CONNECTIONS

1 C



MARKING DIAGRAM



А	= Assembly Location
Υ	= Year
WW	= Work Week
AKA	= Polarity Designator
х	= G or H
G	= Pb-Free Package

н = Halide-Free Package

ORDERING INFORMATION

Device	Package	Shipping
NTSV20100CTG	TO–220 (Pb–Free)	50 Units / Rail

MAXIMUM RATINGS

Rating	Symbol	Value	Unit	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	100	V	
Average Rectified Forward Current (Rated V _R , T _C = 130°C) Per device Per diode	I _{F(AV)}	20 10	A	
Peak Repetitive Forward Current (Rated V _R , Square Wave, 20 kHz, T _C = 125°C) Per device Per diode	I _{FRM}	40 20	A	
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I _{FSM}	100	A	
Operating Junction Temperature	TJ	-40 to +150	°C	
Storage Temperature	T _{stg}	-40 to +150	°C	
Voltage Rate of Change (Rated V _R)	dv/dt	10,000	V/μs	

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected. NE

THERMAL CHARACTERISTICS

Rating		Symbol	Va	lue	Unit
Maximum Thermal Resistance Junction-to-Case Junction-to-Ambient	NDED	R _{θJC} R _{θJA}		2.0 70	°C/W
ELECTRICAL CHARACTERISTICS (Per Leg u	less otherwise noted)	OKI		-	

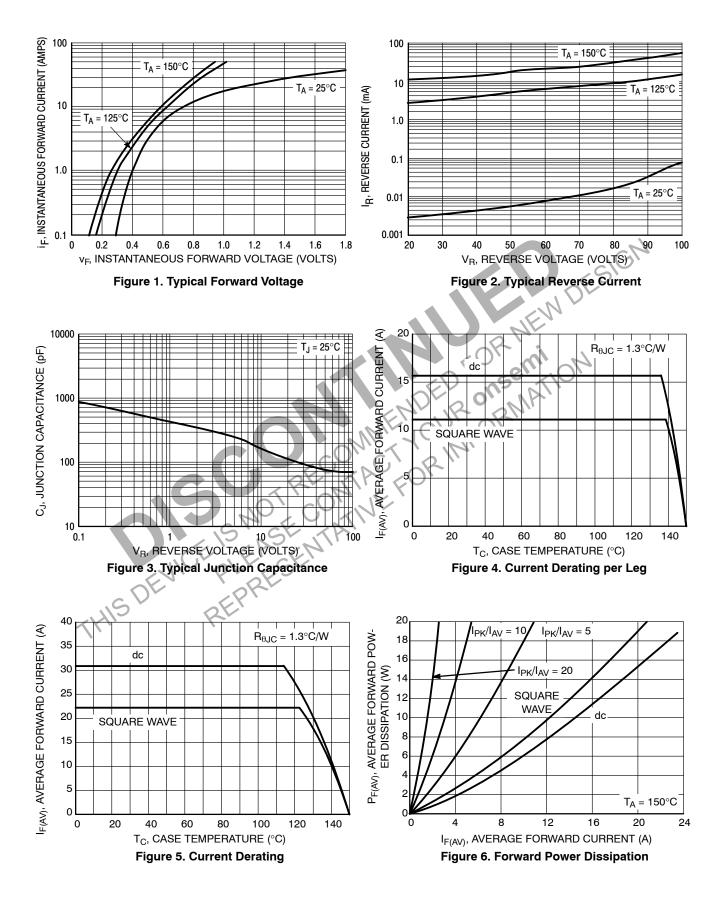
ELECTRICAL CHARACTERISTICS (Per Leg unless otherwise noted)

Rating	Symbol	Тур	Max	Unit
Maximum Instantaneous Forward Voltage (Note 1)	٧F			V
$(I_F = 5 \text{ A}, T_J = 25^{\circ}\text{C})$		0.55	-	
(I _F = 10 A, T _J = 25°C)		0.65	0.98	
		0.50		
$(I_F = 5 \text{ A}, T_J = 125^{\circ}\text{C})$		0.50 0.58	-	
(I _F = 10 A, T _J = 125°C)		0.58	0.82	
Maximum Instantaneous Reverse Current (Note 1)	I _R			
(V _R = 70 V, T _J = 25°C)		17	-	μΑ
(V _R = 70 V, T _J = 125°C)		5.3	-	mA
(Rated dc Voltage, $T_J = 25^{\circ}$ C)		_	800	μΑ
(Rated dc Voltage, $T_J = 125^{\circ}C$)		12	25	mA

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions. 1. Pulse Test: Pulse Width = $300 \ \mu$ s, Duty Cycle $\leq 2.0\%$

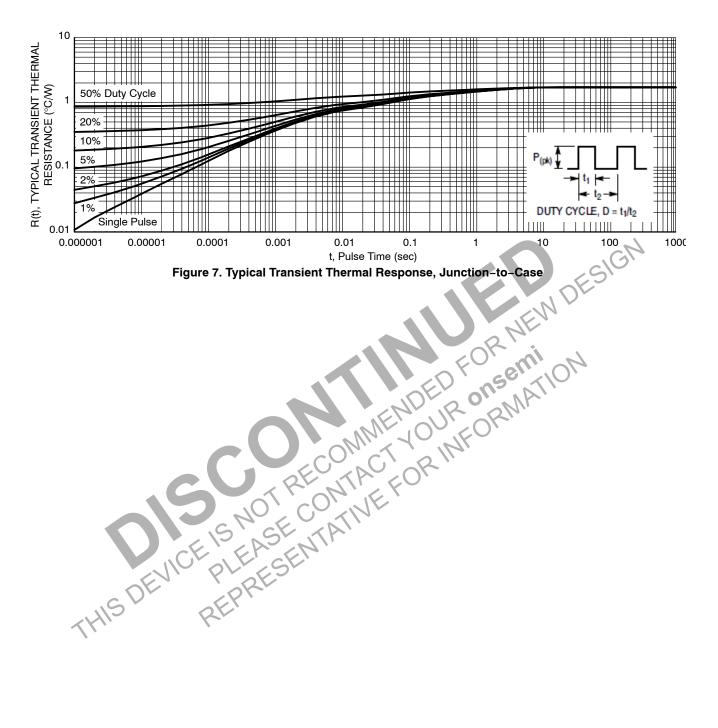
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TYPICAL CHARACTERISITICS

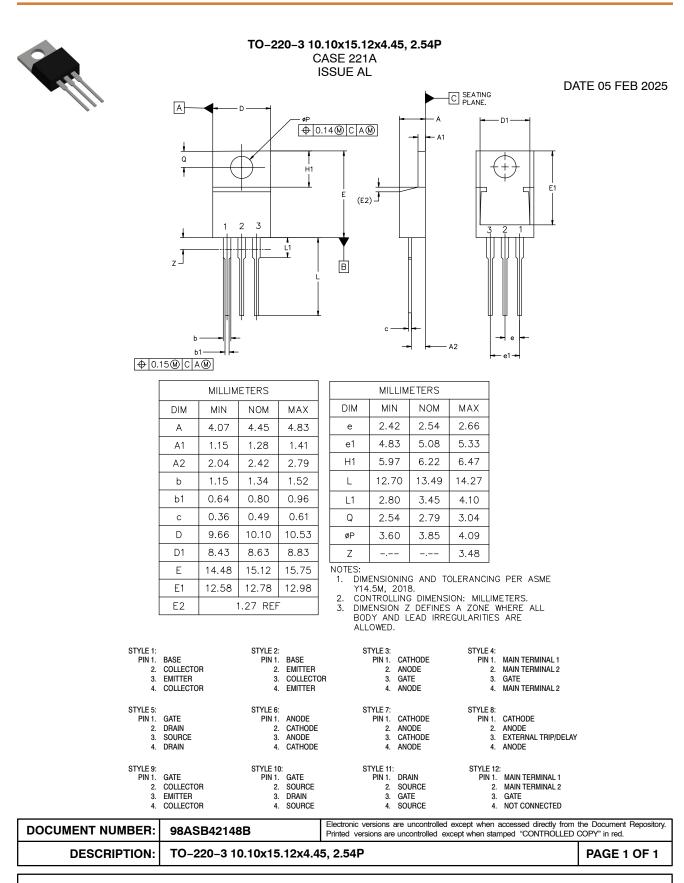


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TYPICAL CHARACTERISITICS







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