


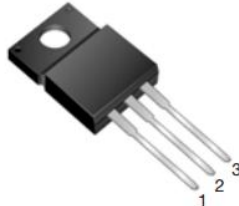
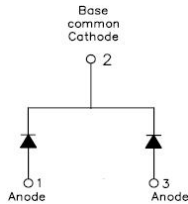
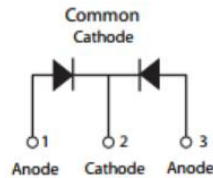
STD10100CE/STF10100CE SCHOTTKY RECTIFIER

Applications

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

Features

- 150 °C T_J operation
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Trench MOS Schottky technology
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

STD10100CE	STF10100CE
	
	
DPAK	ITO-220AB

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	100	V
Average Rectified Forward Current	$I_F (AV)$	50% duty cycle @T _c =95°C, rectangular wave form	5(Per Leg) 10(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I_{FSM}	8.3ms, Half Sine pulse	80	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 2.5A, Pulse, T _J = 25 °C	0.60	-	V
		@ 5A, Pulse, T _J = 25 °C	0.79	0.83	
	V _{F2}	@2.5A, Pulse, T _J = 125 °C	0.55	-	V
		@ 5A, Pulse, T _J = 25 °C	0.66	0.72	
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R T _J = 25 °C	4	120	uA
	I _{R2}	@V _R = rated V _R T _J = 125 °C	1.3	15	mA
Junction Capacitance(Per Leg)	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	167	-	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

* Pulse width < 300 μs, duty cycle < 2%

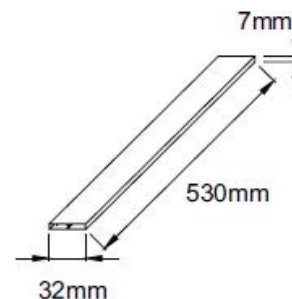
Thermal-Mechanical Specifications:

Characteristics	Symbol	STD10100CE	STF10100CE	Units
Junction Temperature	T _J	-55 to +150		°C
Storage Temperature	T _{stg}	-55 to +150		°C
Typical Thermal Resistance Junction to Case(Per Leg)	R _{θJC}	2.0	5.5	°C/W

Tube Specification

Device	Package	Weight	Shipping
STD10100CE	DPAK	0.39	2500pcs / reel
STF10100CE	ITO-220AB	2.0	50pcs / tube

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

Tube Specification(ITO-220AB)


Ratings and Characteristics Curves

Figure 1
Typical Forward Characteristics

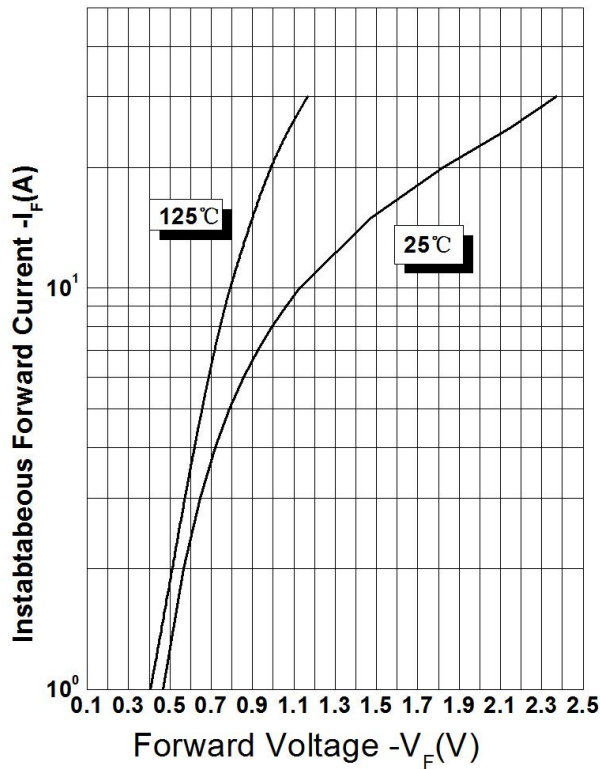


Figure 2
Typical Reverse Characteristics

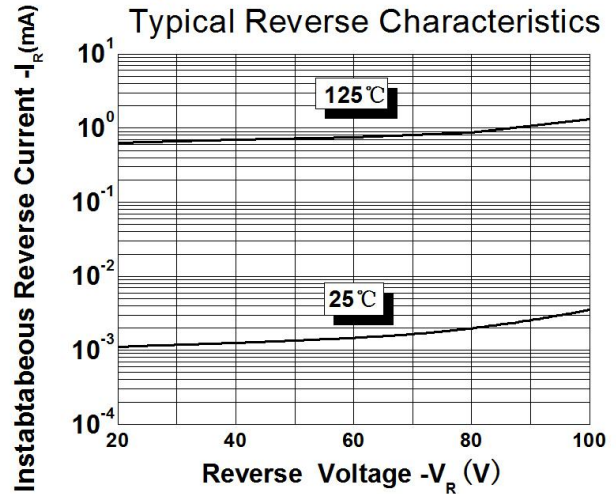
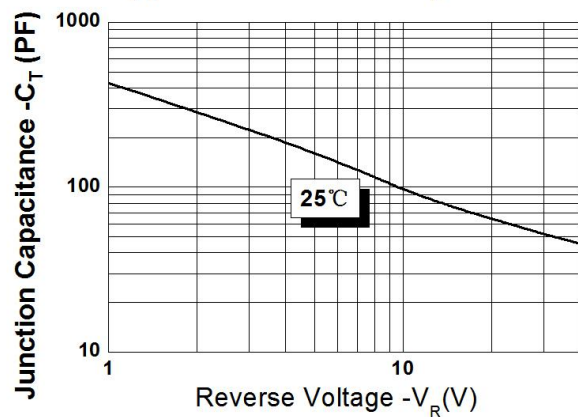
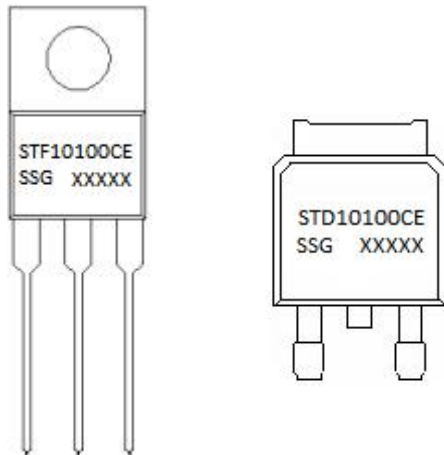


Figure 3
Typical Junction Capacitance



Marking Diagram

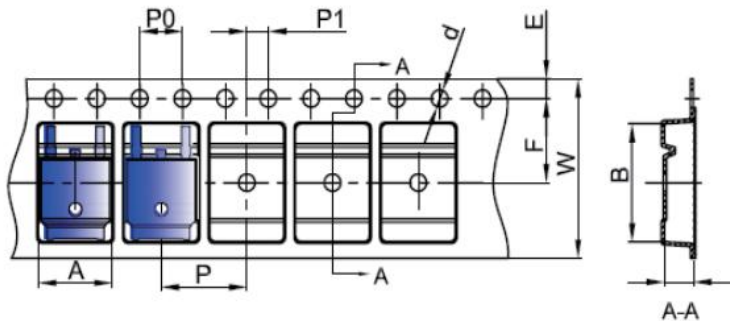


Where XXXXX is YYWWL

ST = Device Type
D/F = Package type
10 = Forward Current (10A)
100 = Reverse Voltage (100V)
CE = Configuration
SSG = SSG
YY = Year
WW = Week
L = Lot Number

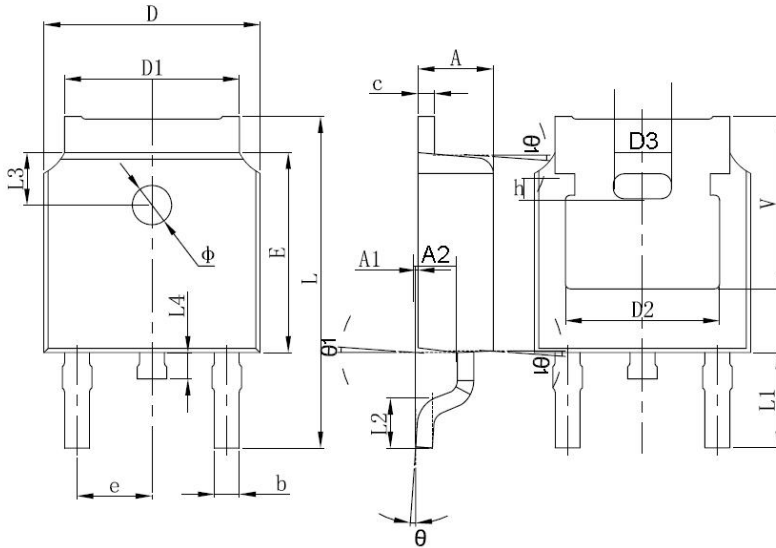
Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification DPAK



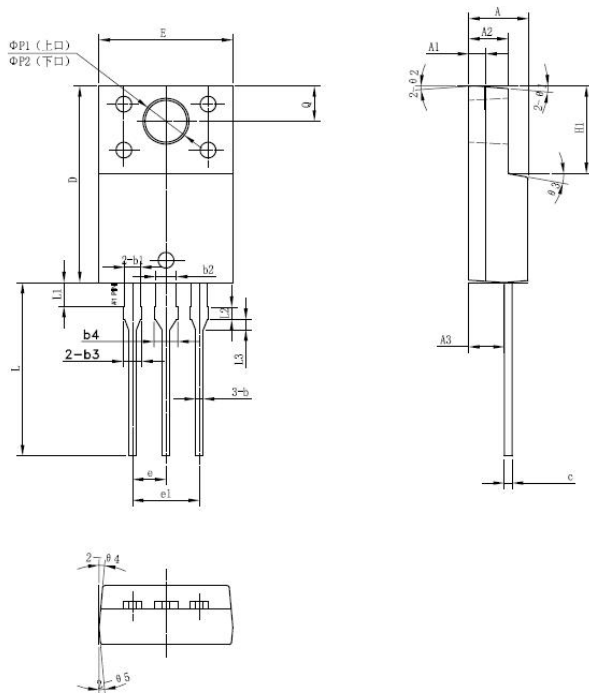
SYMBOL	Millimeters	
	Min.	Max.
A	6.80	7.00
B	10.40	10.60
C	2.60	2.80
d	Φ1.45	Φ1.65
E	1.65	1.85
F	7.40	7.60
P0	3.90	4.10
P	7.90	8.10
P1	1.90	2.10
W	15.90	16.30

Mechanical Dimensions DPAK



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.40	0.087	0.094
A1	0.00	0.127	0.000	0.005
b	0.66	0.86	0.026	0.034
c	0.46	0.60	0.018	0.024
D	6.50	6.70	0.256	0.264
D1	5.13	5.46	0.202	0.215
D2	4.83 REF.		0.190 REF.	
E	6.00	6.20	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.70	10.40	0.381	0.409
L1	2.90 REF.		0.144 REF.	
L2	1.40	1.70	0.055	0.067
L3	1.60 REF.		0.063 REF.	
L4	0.60	1.00	0.024	0.039
Φ	1.10	1.30	0.043	0.051
Θ	0°	8°	0°	8°
h	0.00	0.30	0.000	0.012
V	5.35 REF.		0.211 REF.	

Mechanical Dimensions ITO-220AB



Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.50	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ΦP1(上□)	3.30	3.50	3.70
ΦP2(下□)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5°	
Θ2		4°	
Θ3		10°	
Θ4		5°	
Θ5		5°	



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