

DF10SC4M

40V 10A

特長

- SMD
- PRISM アバランシェ保証
- 小型大電流容量

Feature

- SMD
- PRISM Rating
- High Io Rating・Small-PKG

用途

- スイッチング電源
- DC/DC コンバータ
- 家電、ゲーム、OA 機器
- 通信、ポータブル機器

Main Use

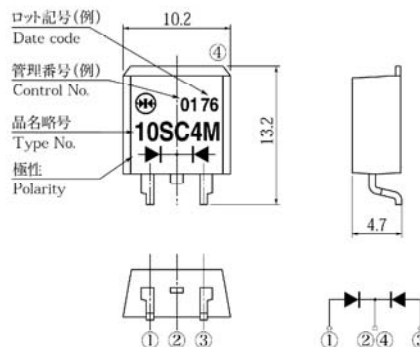
- Switching Regulator
- DC/DC Converter
- Home Appliance, Game, Office Automation
- Communication, Portable set

■外観図 OUTLINE

Package : STO-220

Unit:mm

Weight 1.5g (Typ)



外形図については新電元Webサイト又は〈半導体製品一覧表〉をご参照下さい。捺印表示については捺印仕様をご確認下さい。

For details of the outline dimensions, refer to our web site or Semiconductor Short Form Catalog. As for the marking, refer to the specification "Marking, Terminal Connection".

■定格表 RATINGS

●絶対最大定格 Absolute Maximum Ratings (指定のない場合 $T_c = 25^\circ\text{C}$)

項目 Item	記号 Symbol	条件 Conditions	品名 Type No.	DF10SC4M	単位 Unit
保存温度 Storage Temperature	T_{stg}			-40~150	$^\circ\text{C}$
接合部温度 Operation Junction Temperature	T_j			150	$^\circ\text{C}$
せん頭逆電圧 Maximum Reverse Voltage	V_{RM}			40	V
繰り返しせん頭サージ逆電圧 Repetitive Peak Surge Reverse Voltage	V_{RRSM}	パルス幅0.5ms, duty 1/40 Pulse width 0.5ms, duty 1/40		45	V
出力電流 Average Rectified Forward Current	I_o	50Hz 正弦波, 抵抗負荷, 1素子当りの出力電流平均値 $I_o/2$ 50Hz sine wave, Resistance load, Per diode $I_o/2$	フィン付き $T_c = 125^\circ\text{C}$ With heatsink $T_c = 125^\circ\text{C}$	10	A
			アルミベース銅張基板実装 $T_a = 33^\circ\text{C}$ On Al-Cu substrate $T_a = 33^\circ\text{C}$	6.8	
せん頭サージ順電流 Peak Surge Forward Current	I_{FSM}	50Hz 正弦波, 非繰り返し1サイクルせん頭値, $T_j = 125^\circ\text{C}$ 50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j = 125^\circ\text{C}$		100	A
繰り返しせん頭サージ逆電力 Repetitive Peak Surge Reverse Power	P_{RRSM}	パルス幅10 μs , 1素子当り, $T_j = 25^\circ\text{C}$ Pulse width 10 μs , Per diode, $T_j = 25^\circ\text{C}$		330	W

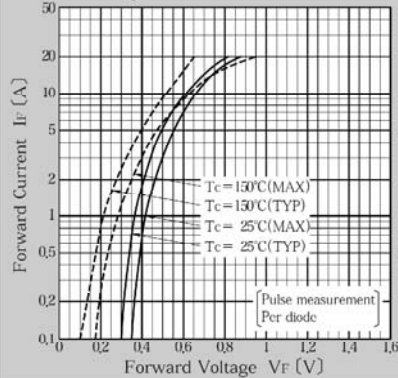
●電氣的・熱的特性 Electrical Characteristics (指定のない場合 $T_c = 25^\circ\text{C}$)

順電圧 Forward Voltage	V_F	$I_F = 5\text{A}$, パルス測定, 1素子当りの規格値 Pulse measurement, Per diode	MAX 0.55	V
逆電流 Reverse Current	I_R	$V_R = V_{RM}$, パルス測定, 1素子当りの規格値 Pulse measurement, Per diode	MAX 3.5	mA
接合容量 Junction Capacitance	C_j	$f = 1\text{MHz}$, $V_R = 10\text{V}$, 1素子当りの規格値 Per diode	TYP 180	pF
熱抵抗 Thermal Resistance	θ_{jc}	接合部・ケース間 Junction to case	MAX 3	$^\circ\text{C/W}$
	θ_{ja}	接合部・周囲間, アルミベース銅張基板実装 Junction to ambient, On Al-Cu substrate	MAX 25	

■特性図 CHARACTERISTIC DIAGRAMS

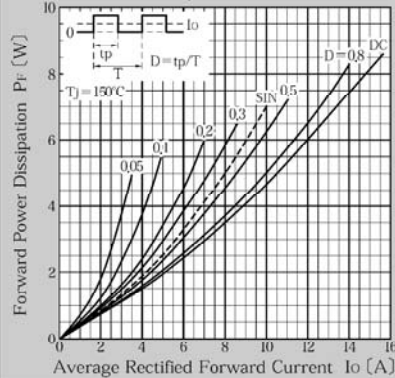
順方向特性

Forward Voltage



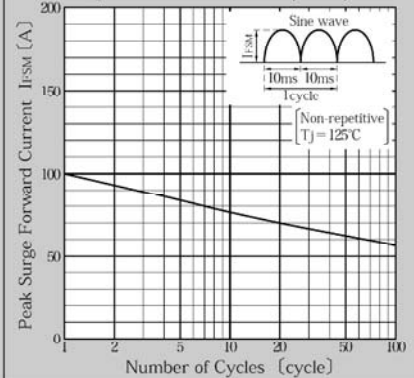
順電力損失曲線

Forward Power Dissipation



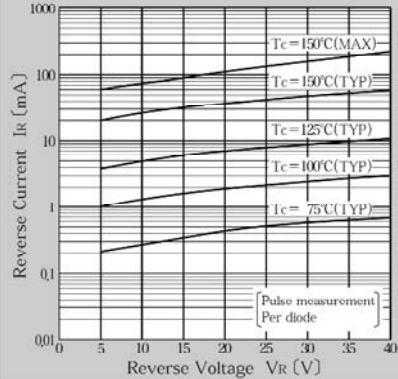
せん頭サージ順電流耐量

Peak Surge Forward Current Capability



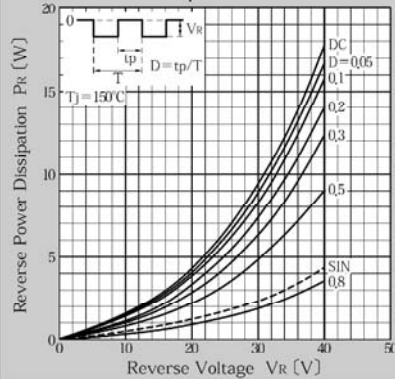
逆方向特性

Reverse Current



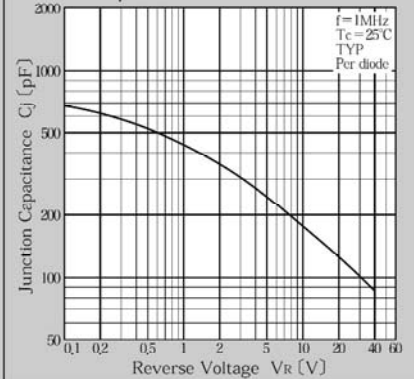
逆電力損失曲線

Reverse Power Dissipation



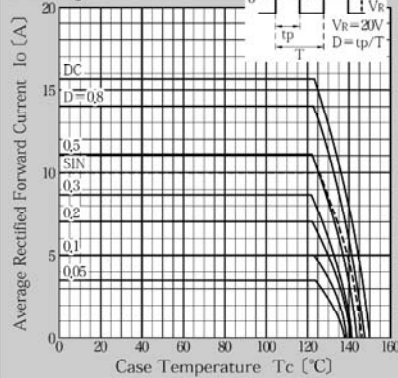
接合容量

Junction Capacitance



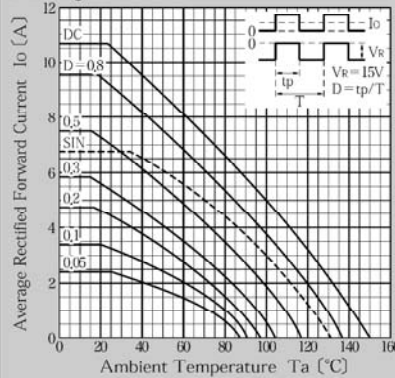
ディレーティングカーブ Tc-Io

Derating Curve Tc-Io



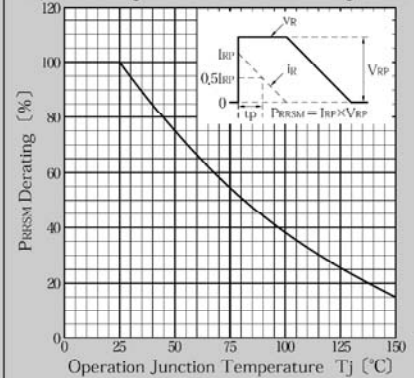
ディレーティングカーブ Ta-Io

Derating Curve Ta-Io



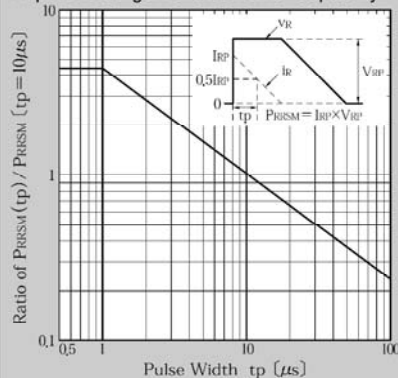
繰り返しせん頭サージ逆電力減少率

Repetitive Surge Reverse Power Derating Curve



繰り返しせん頭サージ逆電力耐量

Repetitive Surge Reverse Power Capability



- * Sine waveは50Hzで測定しています。
- * 50Hz sine wave is used for measurements.
- * 半導体製品の特性は一般的にバラツキを持っています。
- * Typical is a statistical average of the device's ability.
- * Semiconductor products generally have characteristic variation.
- * Typical is a statistical average of the device's ability.

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