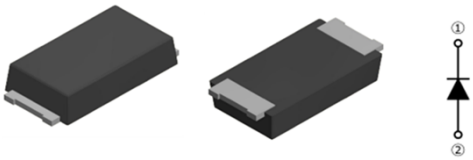
ShinDengen
New power. Your power.

Fast Recovery Diode

MC03FA40



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■ 特徴 / Features

- 高速trr
  Fast recovery time
- 低IR
  Low leakage current
- ソフトリカバリー
  Soft recovery
- RoHS指令対応
  RoHS compliant

■ アプリケーション / Applications

- DC/DCコンバータ
  DC/DC converters
- AC/DC電源
  AC/DC power supplies
- フライホイール
  Freewheeling diodes

■ 最大定格 / Maximum ratings

Parameter	Symbol	Conditions	Limits	Unit
くり返しピーク逆電圧 Repetitive Peak Reverse Voltage	V_{RRM}		400	V
平均整流電流 Average Rectified Output Current	I_O	T_L= 92℃	3	A
実効順電流 R.M.S Forward Current	$I_{F(RMS)}$		4.71	A
サージ順電流 Surge Forward Current	I_{FSM}	50Hz 正弦半波、1サイクル、非くり返し Half Sine Wave, 1cycle, Non-repetitive	45	A
動作接合温度範囲 Operating Junction Temperature Range	T_{jw}		-55 ～ +150	℃
保存温度範囲 Storage Temperature Range	T_{stg}		-55 ～ +150	℃

■ 電気的特性 / Electrical characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
ピーク逆電流 Peak Reverse Current	I_{RM}	V_{RM}=V_{RRM} Tj=25℃	-	-	0.01	mA
ピーク順電圧 Peak Forward Voltage	V_{FM}	I_{FM}= 3A Tj=25℃	-	-	1.25	V
逆回復時間 Reverse recovery time	t_{rr}	I_{FM}= 3A Tj=25℃ -di/dt=50A/μs	-	-	30	ns
熱抵抗 Thermal Resistance	$R_{th\ (j-l)}$	接合部ーリード間 Junction to Lead	-	-	8	℃/W
	$R_{th\ (j-a)}$	接合部ー周囲間（プリント基板実装） Junction to Ambient(P.C.Board mounted)	-	-	70	℃/W

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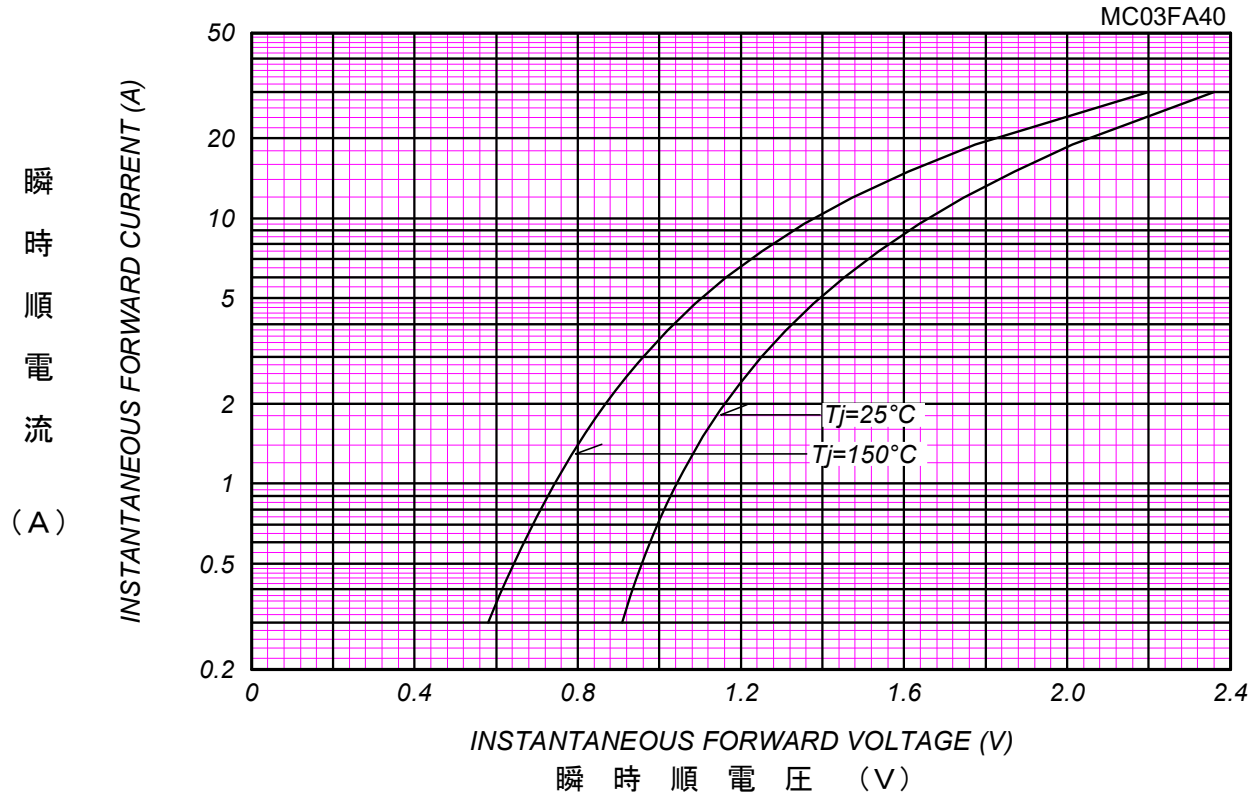
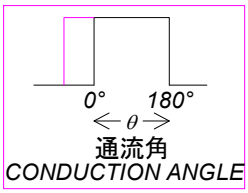
FORWARD CURRENT VS. VOLTAGE





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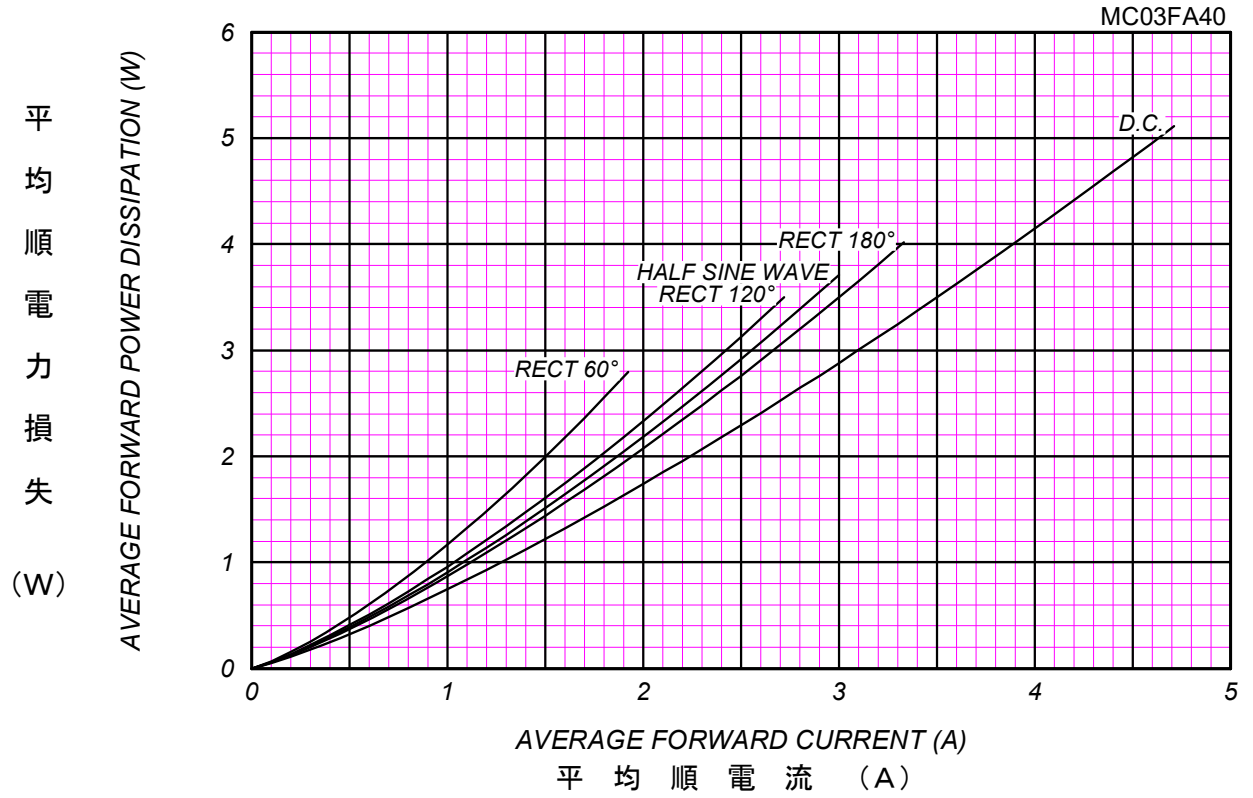
AVERAGE FORWARD POWER DISSIPATION



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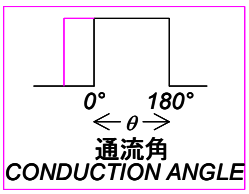

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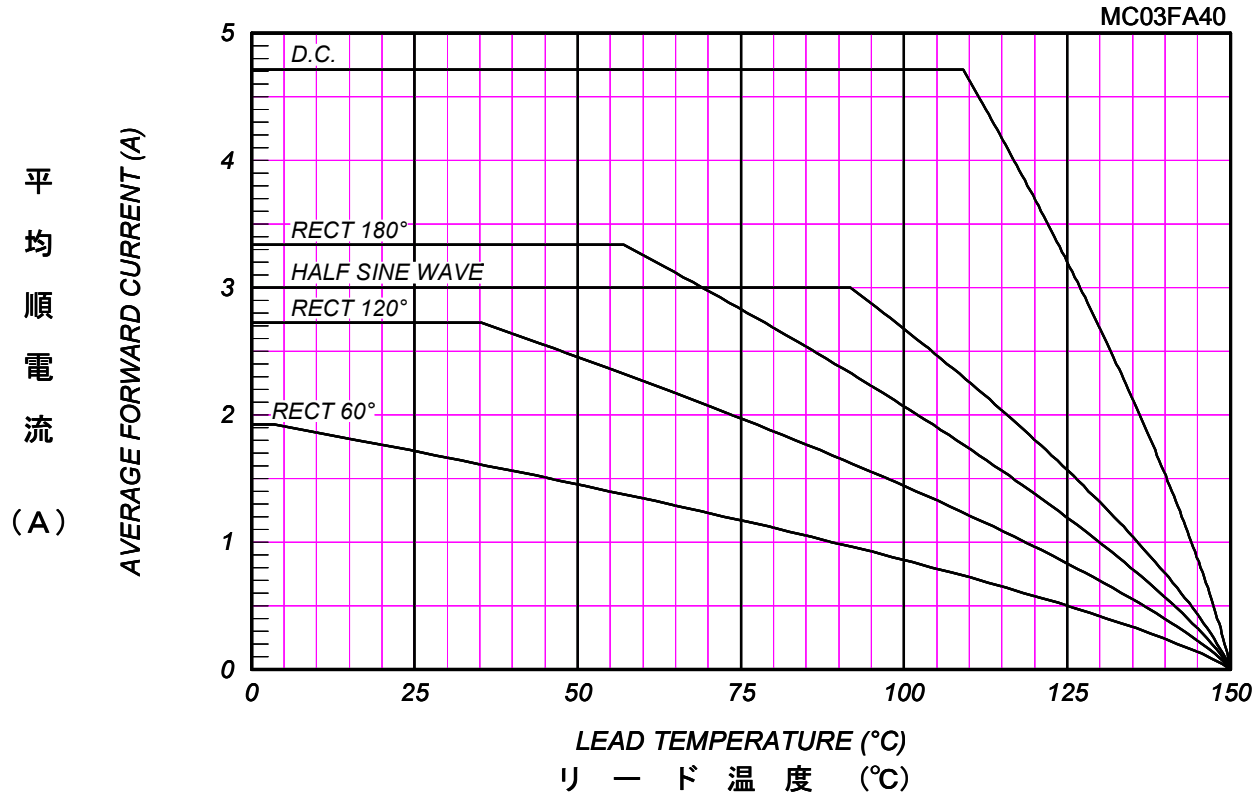
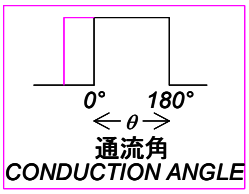
AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE





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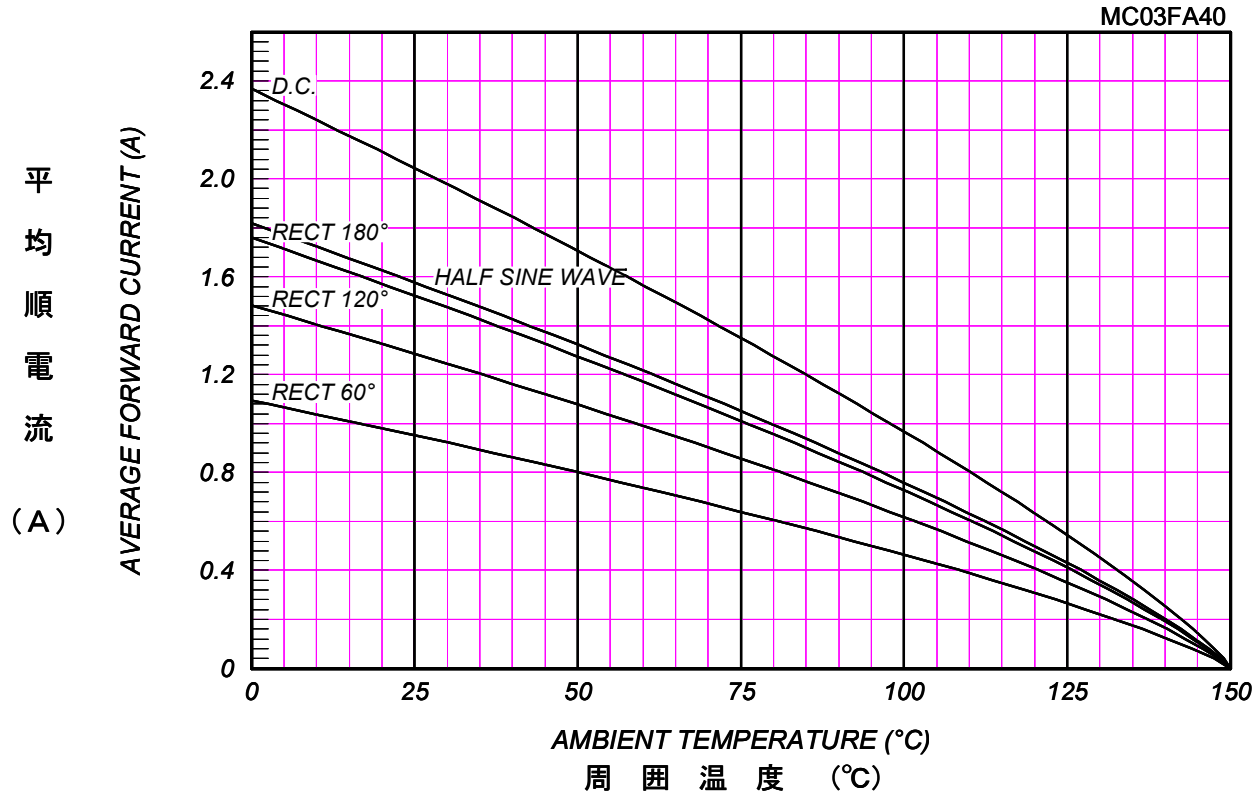
AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Glass-Epoxy Substrate Mounted(Soldering Land=2×3.5mm, Both side)



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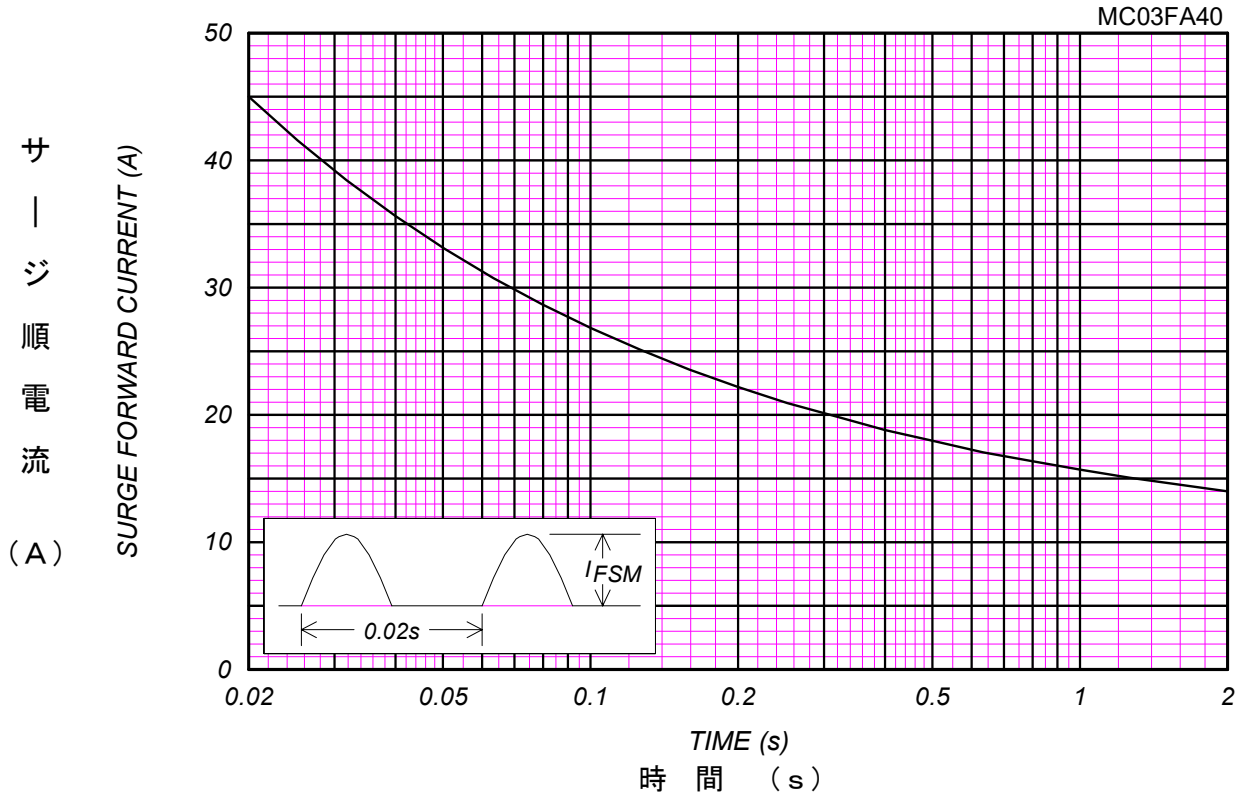
サ　ー　ジ　順　電　流　定　格
SURGE CURRENT RATINGS

f=50Hz,Half Sine Wave,Non-Repetitive,No Load



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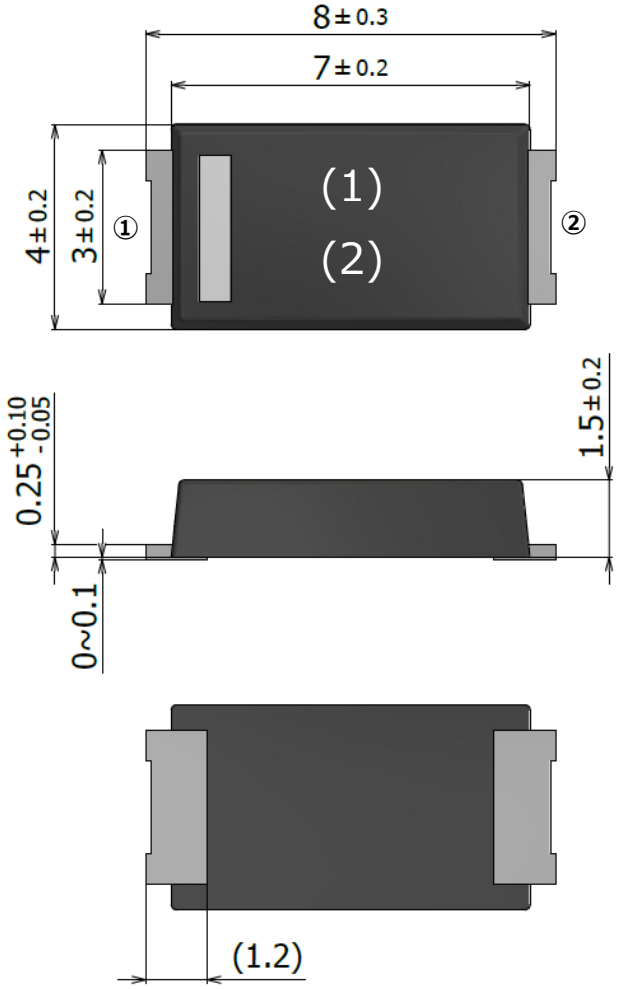
■外形図 Package Outline

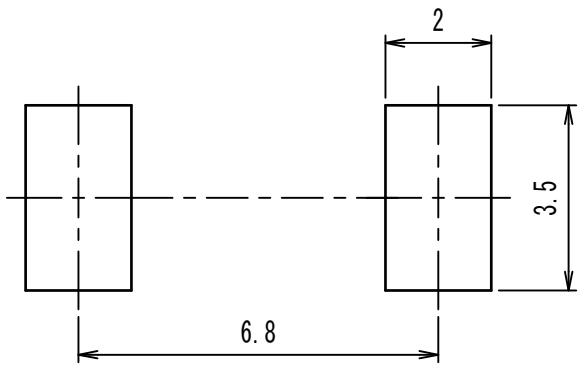


マーク記載内容 Marking
(1) 製品名 Type
MC03FA40 : F3H

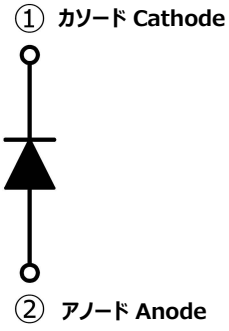
(2) ・生産年 Production year
・生産月 Production month
・生産ロット Lot No.

製品重量： 0.13g
Weight

■推奨ランドサイズ Mounting Pad Layout



■内部回路図 Inner Circuit



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   【Standard applications】
   Computers, office automation and other office equipment, communication terminals, test and measurement equipment, audio/visual equipment, amusement equipment, consumer electronics, machine tools, personal electronic equipment, industrial equipment, etc.

   【特別用途】
   輸送機器(車載、船舶等)、基幹用通信機器、交通信号機器、防災/防犯機器、各種安全機器、医療機器等
   【Special applications】
   Transportation equipment (vehicles, ships, etc.), trunk-line communication equipment, traffic signal control systems, anti□disaster/crime systems, safety equipment, medical equipment, etc.

   【特定用途】
   原子力制御システム、航空機器、航空宇宙機器、海底中継機器、生命維持のための装置、システム等
   【Specific applications】
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