

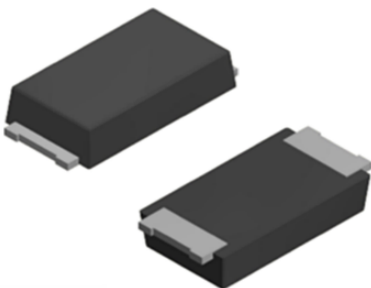
MC05EA03
Schottky Barrier Diodes
30V, 5A

Feature

- Trench SBD
- Low V_F
- High Recovery Speed
- RoHS:Yes

OUTLINE

Package (House Name): nSMC_FL



Equivalent circuit



Absolute Maximum Ratings

Item	Symbol	Conditions	Ratings	Unit
Storage temperature	Tstg		-55 to 150	°C
Junction temperature	Tj		-55 to 150	°C
Repetitive peak reverse voltage	V_{RRM}		30	V
Average forward current	$I_F(AV)$	Tl=114°C	5	A
Average forward current	$I_F(AV)$		7.85	A
Surge forward current	I_{FSM}	50Hz half sine wave, 1 cycle, Non-repetitive	100	A

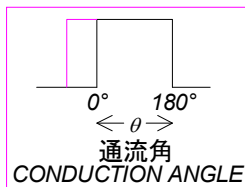
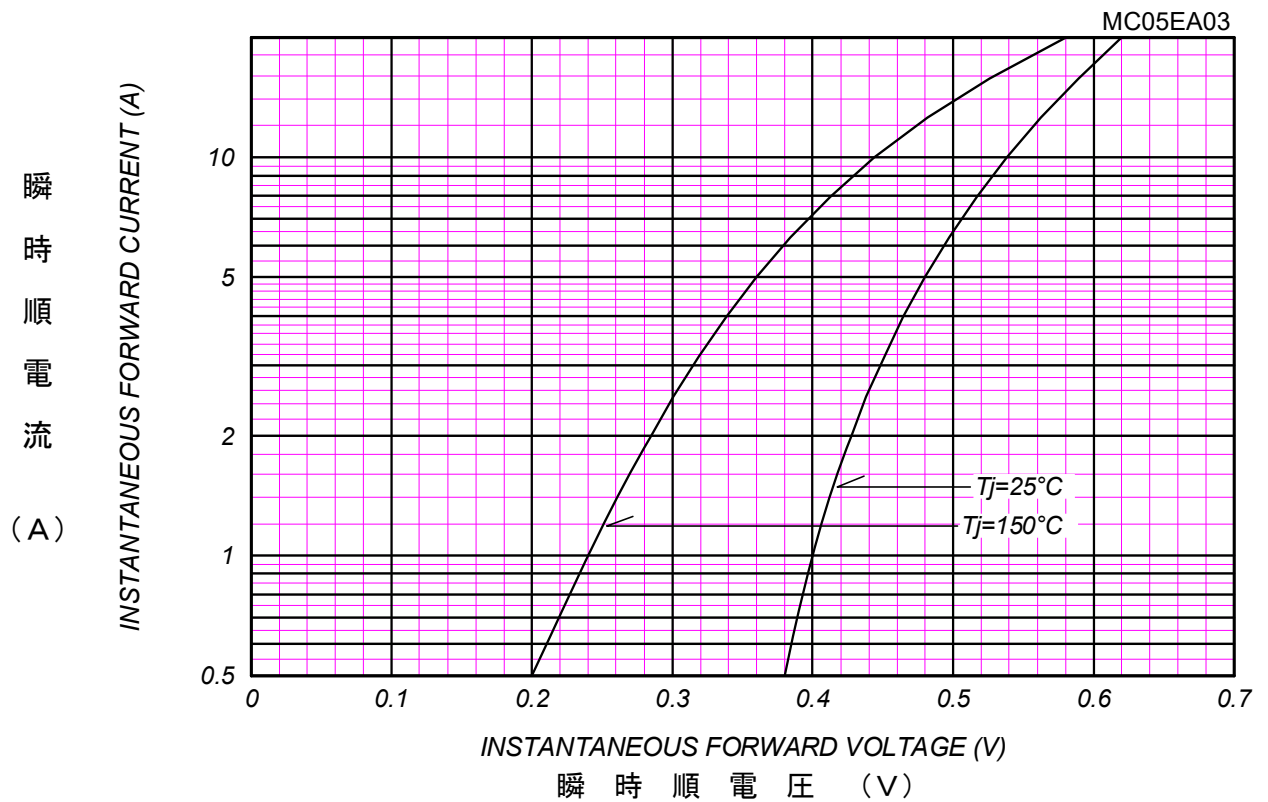
※ :See the original Specifications

Electrical Characteristics

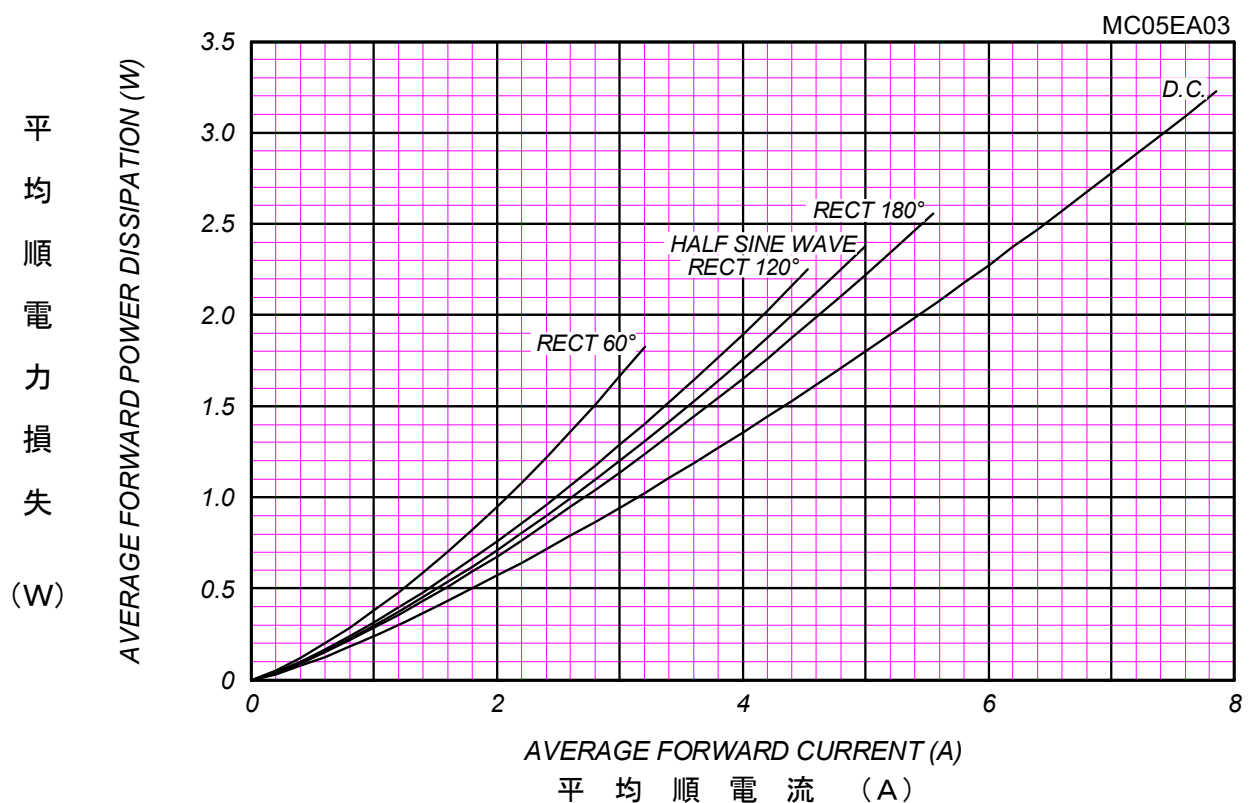
Item	Symbol	Conditions	Ratings			Unit
			MIN	TYP	MAX	
Forward voltage	V_F	$I_F=5A, T_j=25^{\circ}C$	-	-	0.48	V
Reverse current	I_R	$V_R=V_{RRM}, T_j=25^{\circ}C$	-	-	0.3	mA
Thermal resistance	$R_{th(j-l)}$	Junction to lead	-	-	8	°C/W
Thermal resistance	$R_{th(j-a)}$	Junction to ambient (P.C.Board mounted)	-	-	70	°C/W

※ :See the original Specifications

順電圧特性
FORWARD CURRENT VS. VOLTAGE

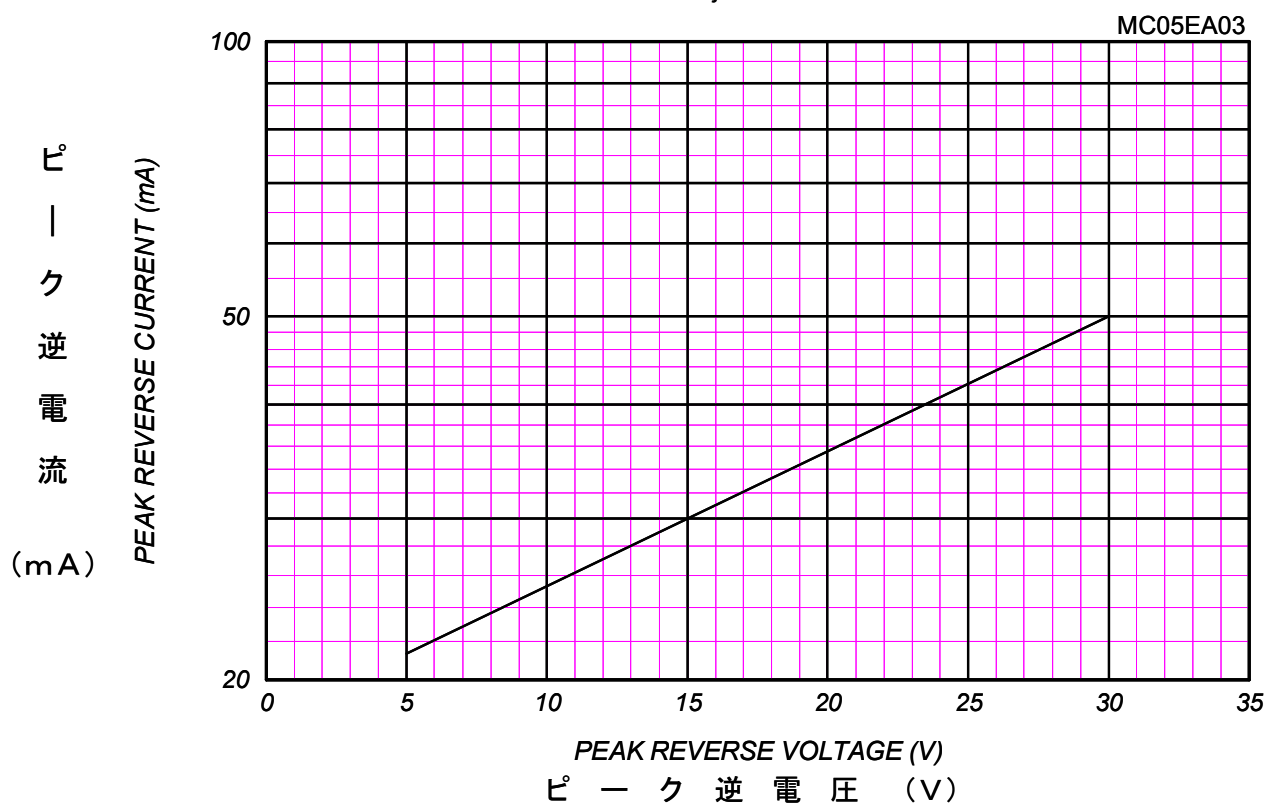


平均順電力損失特性
AVERAGE FORWARD POWER DISSIPATION

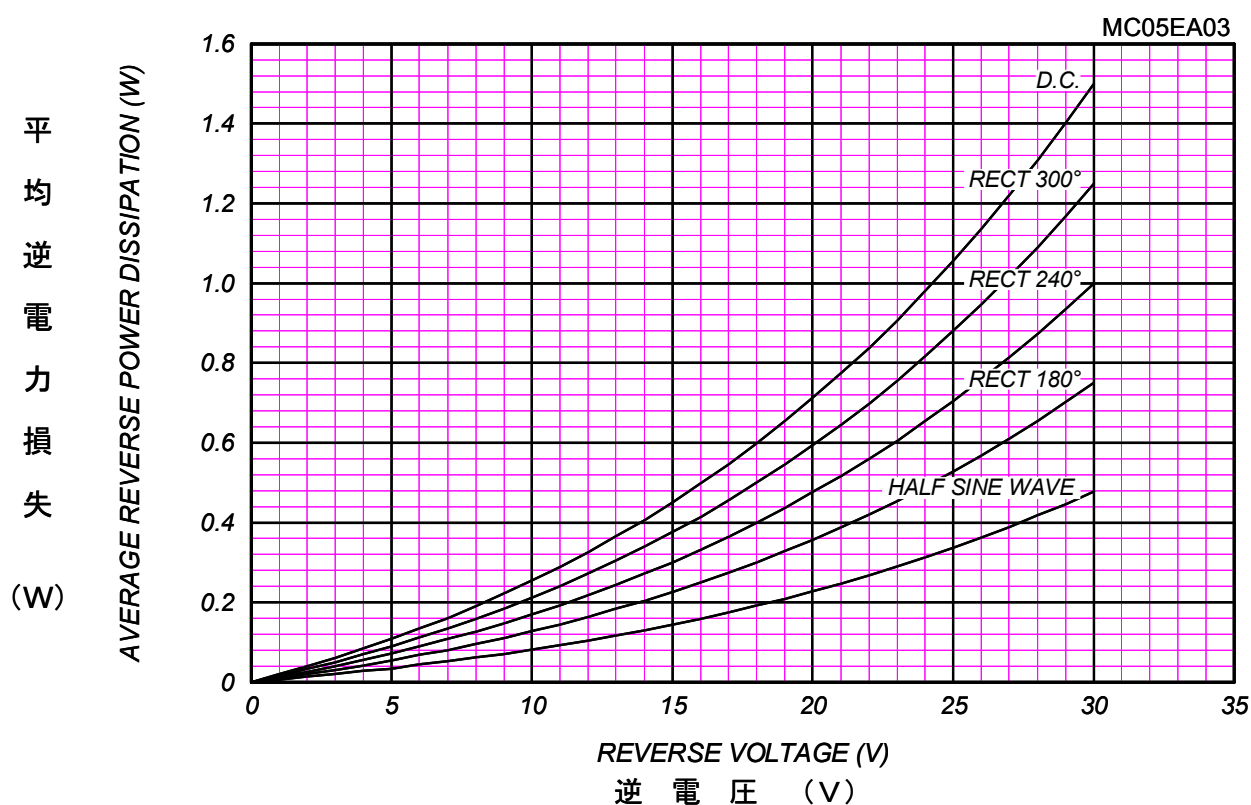


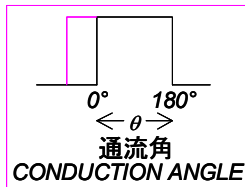
ピーク逆電流 — ピーク逆電圧特性
PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

$T_J = 150\text{ }^{\circ}\text{C}$



平均逆電力損失
AVERAGE REVERSE POWER DISSIPATION

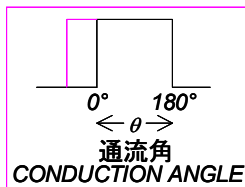
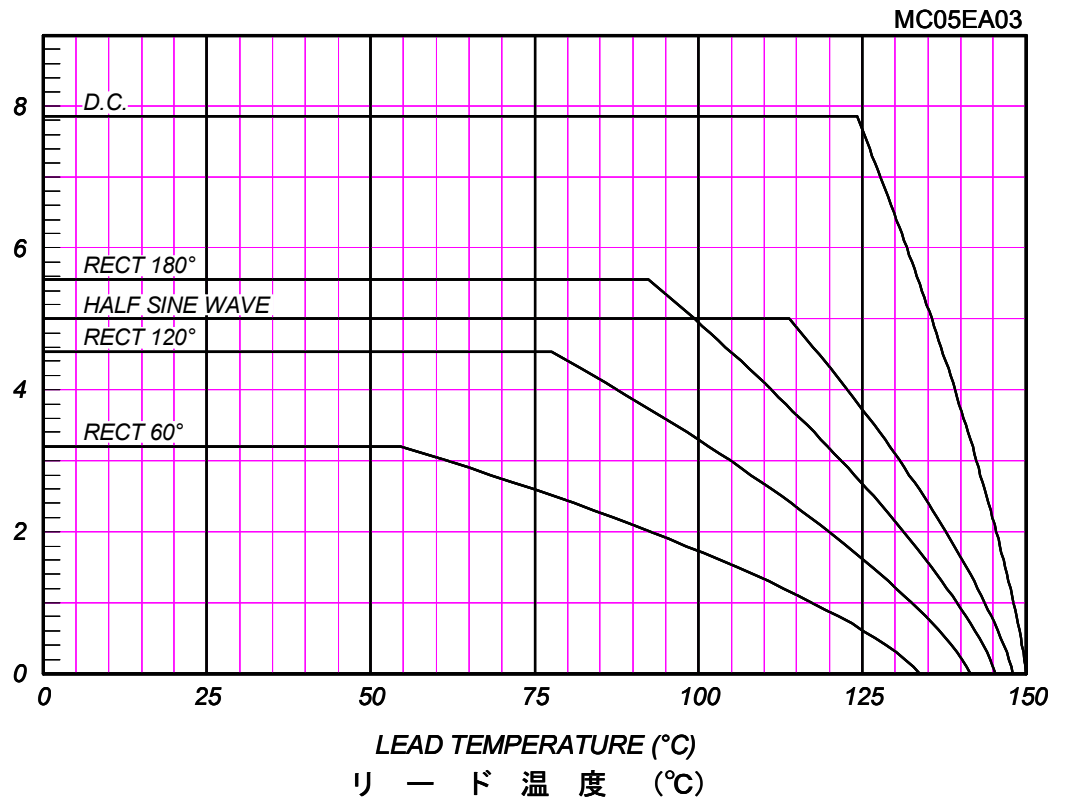




平均順電流－リード温度定格
AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

$V_{RM}=15V$

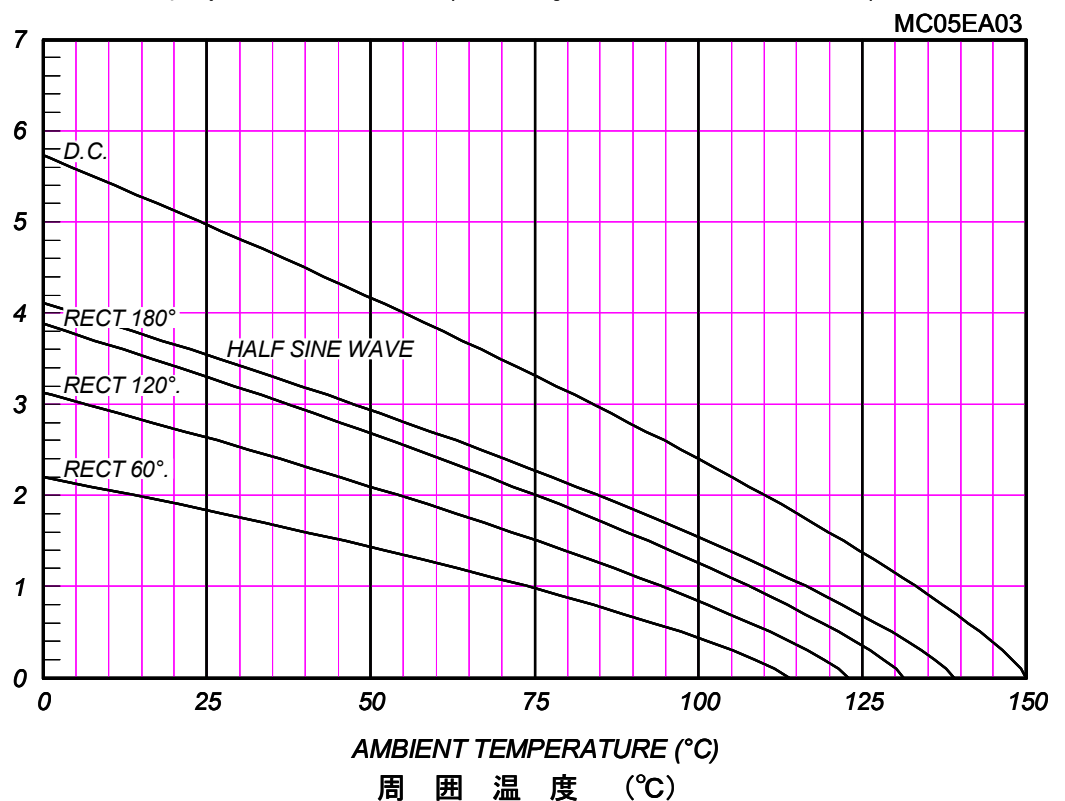
平均順電流
(A)
AVERAGE FORWARD CURRENT (A)



平均順電流－周囲温度定格
AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Glass-Epoxy Substrate Mounted (Soldering Land=2×3.5mm,Both side), $V_{RM}=15V$

平均順電流
(A)
AVERAGE FORWARD CURRENT (A)



サージ順電流定格 SURGE CURRENT RATINGS

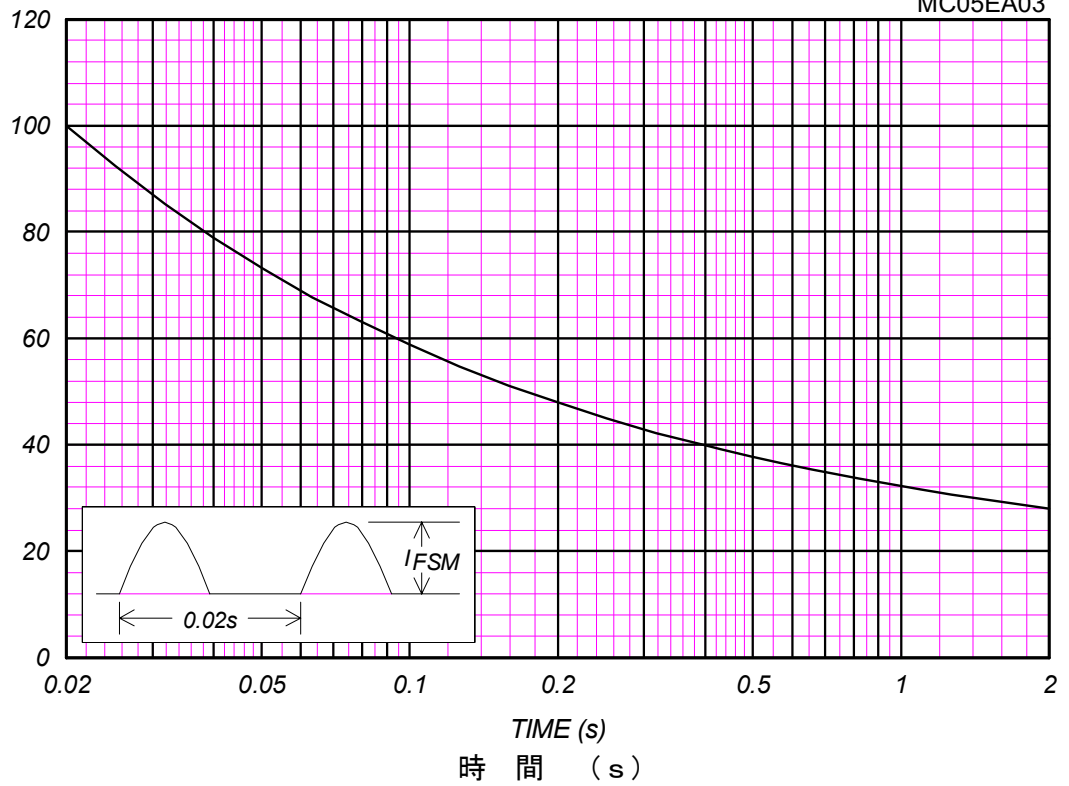
f=50Hz, Half Sine Wave, Non-Repetitive, No Load

MC05EA03

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(A)

SURGE FORWARD CURRENT (A)



接合容量特性 JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

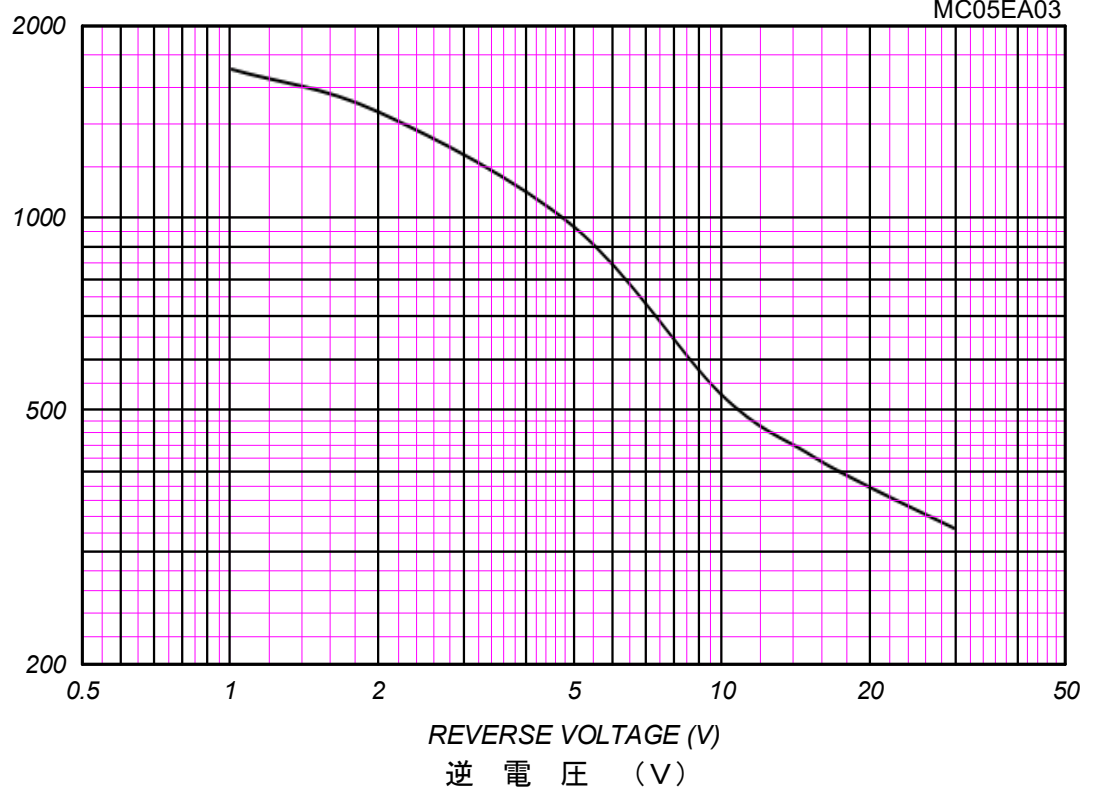
T_j=25°C, V_m=20mV_{RMS}, f=100kHz, Typical Value

MC05EA03

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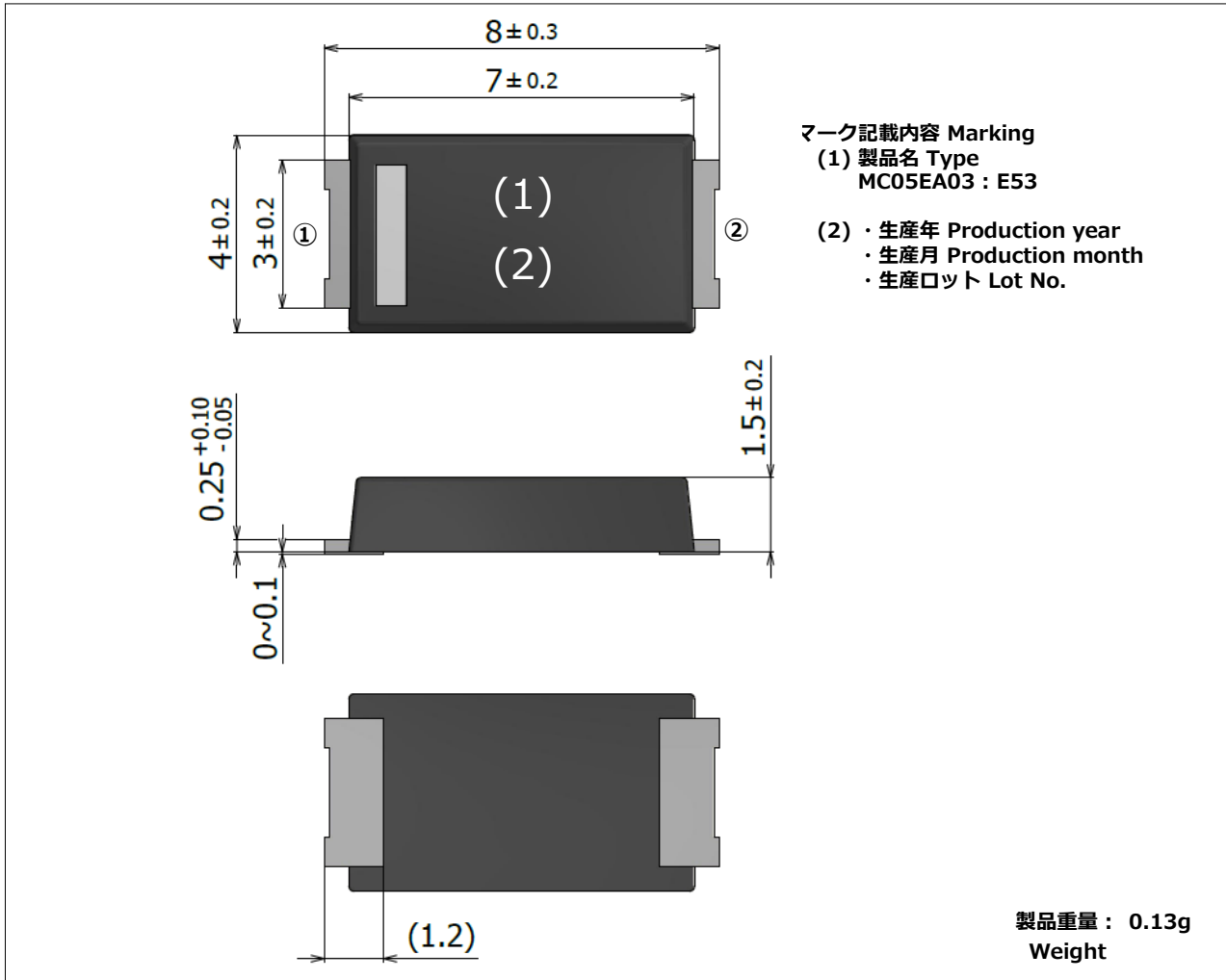
(pF)

JUNCTION CAPACITANCE (pF)

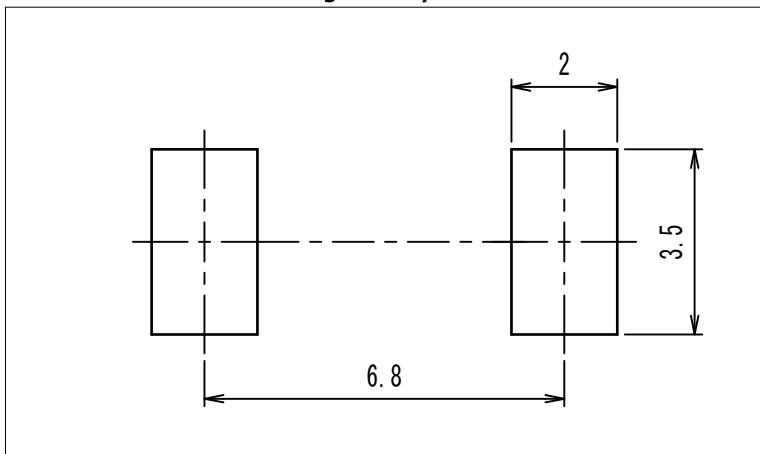


nSMC_FL

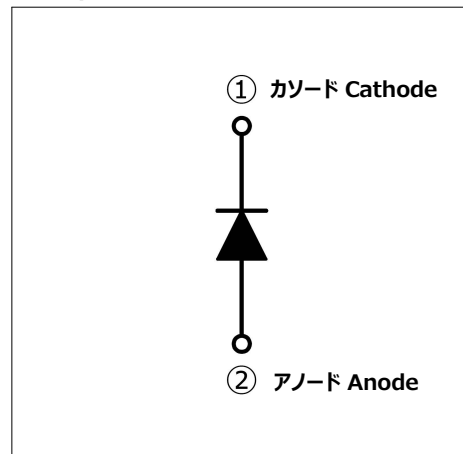
■ 外形図 Package Outline



■ 推奨ランドサイズ Mounting Pad Layout



■ 内部回路図 Inner Circuit



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