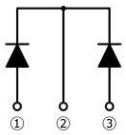
Schottky Barrier Diode

ShinDengen
New power. Your power.

FCQS30A045



TO-220FullMold

■特長 / Features

- 低VF
  Low forward voltage drop
- 高周波動作
  High frequency operation
- RoHS指令対応
  RoHS compliant

■アプリケーション / Applications

- 二次側整流
  Secondary side rectification
- DC/DCコンバータ
  DC/DC converters
- 逆流防止
  Re-Circulating Diode
- 太陽電池用バイパスダイオード
  Bypass diode for Solar Cells

■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}		45	V
平均整流電流 Average Rectified Output Current	I_O	Tc=116℃	30.0	A
サージ順電流 Surge Forward Current	I_{FSM}	50Hz 正弦全波、1サイクル、非くり返し Full Sine Wave, 1cycle, Non-repetitive	200	A
動作接合温度範囲 Operating Junction Temperature Range	T_{jw}		-40 ～ +150	℃
保存温度範囲 Storage Temperature Range	T_{stg}		-40 ～ +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}	$V_{RM}=V_{RRM}$ T_j=25℃ per diode	-	-	1.00	mA
ピーク順電圧 Peak Forward Voltage	V_{FM}	I_{FM}=15A T_j=25℃ per diode	-	-	0.55	V
熱抵抗 Thermal Resistance	R_{th}	接合部ーケース間 Junction to Case	-	-	1.5	℃/W

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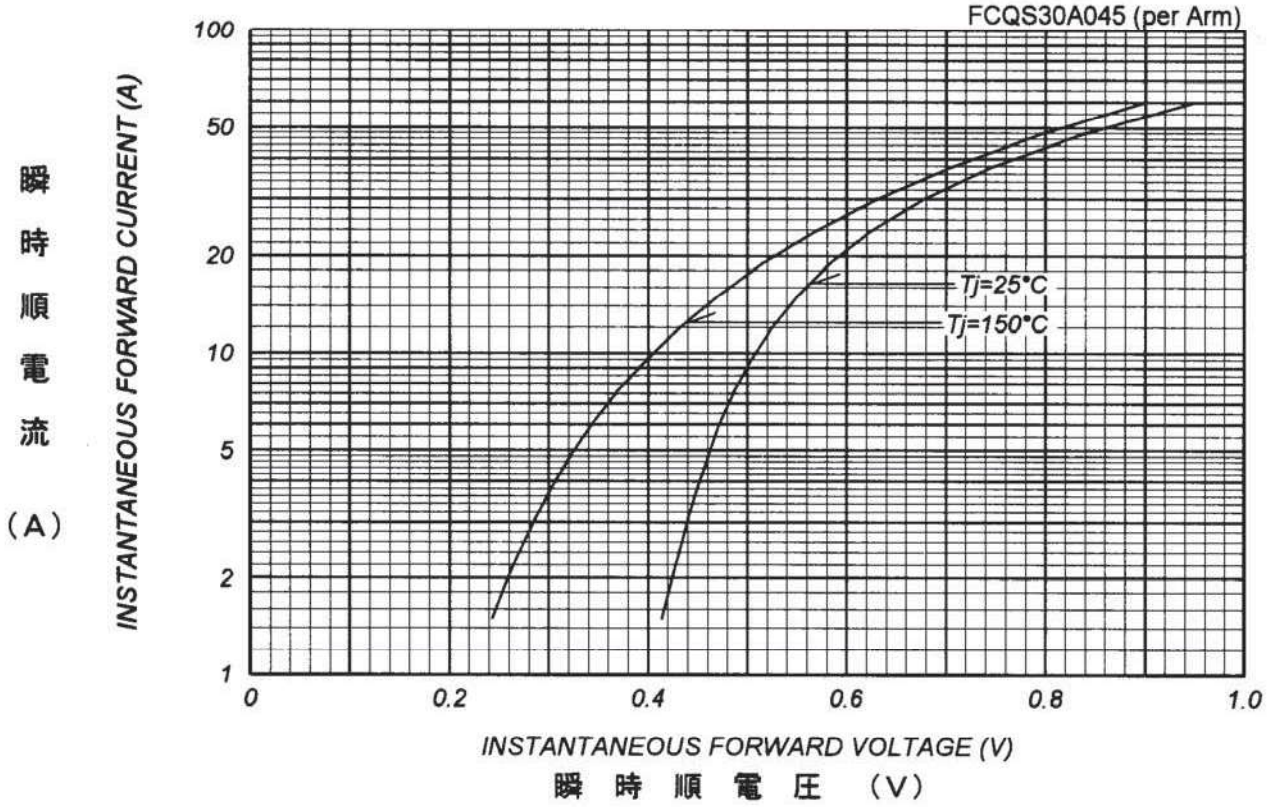
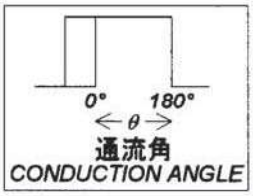
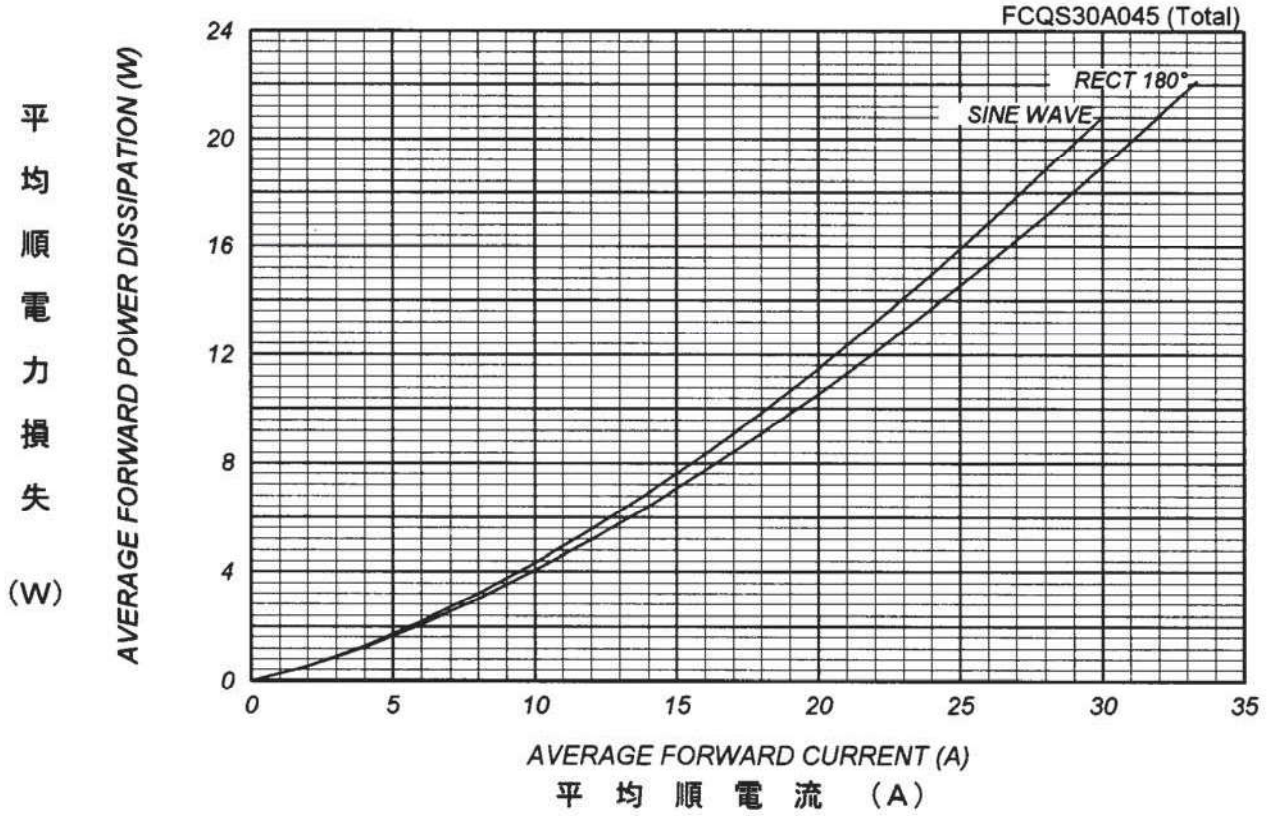
順 電 圧 特 性
FORWARD CURRENT VS. VOLTAGE





平 均 順 電 力 損 失 特 性
AVERAGE FORWARD POWER DISSIPATION



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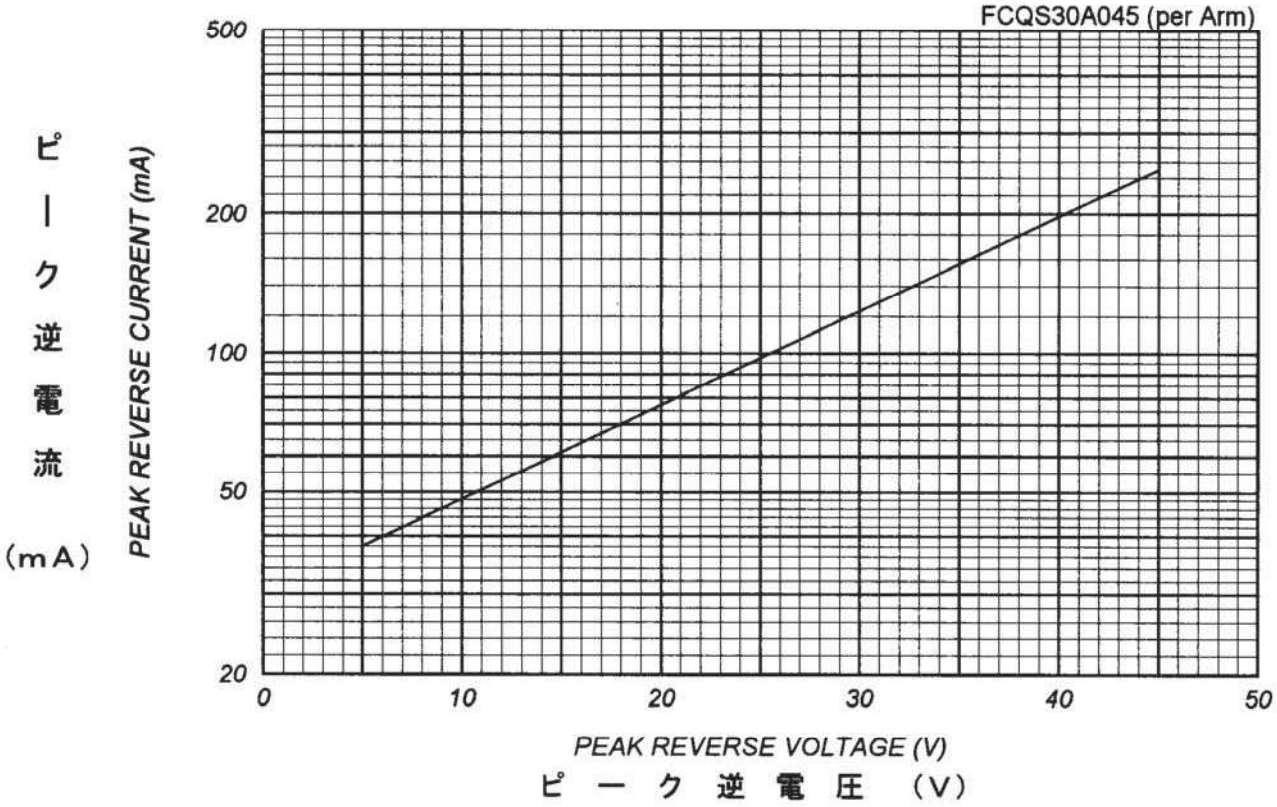
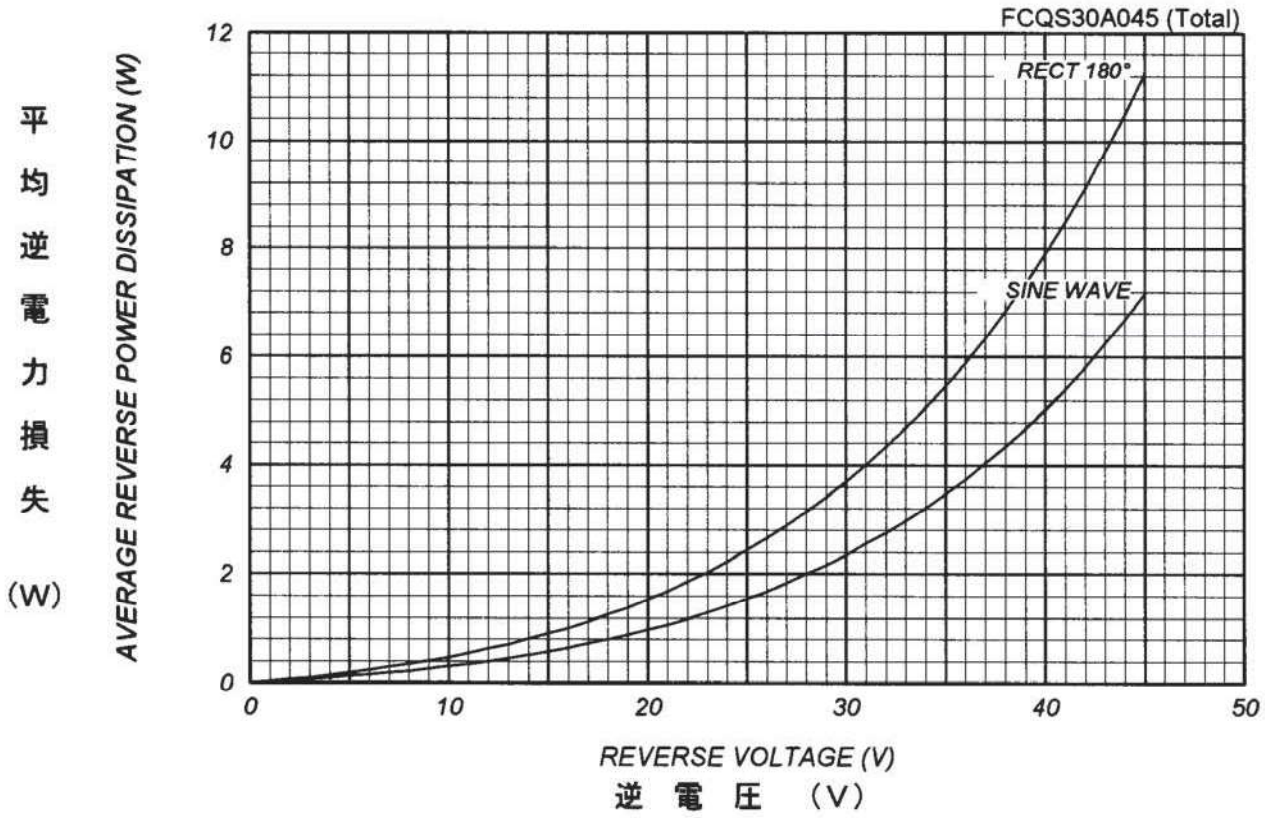
ピーク逆電流 － ピーク逆電圧特性
PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

Tj= 150 °C



平均逆電力損失
AVERAGE REVERSE POWER DISSIPATION



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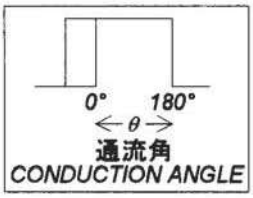

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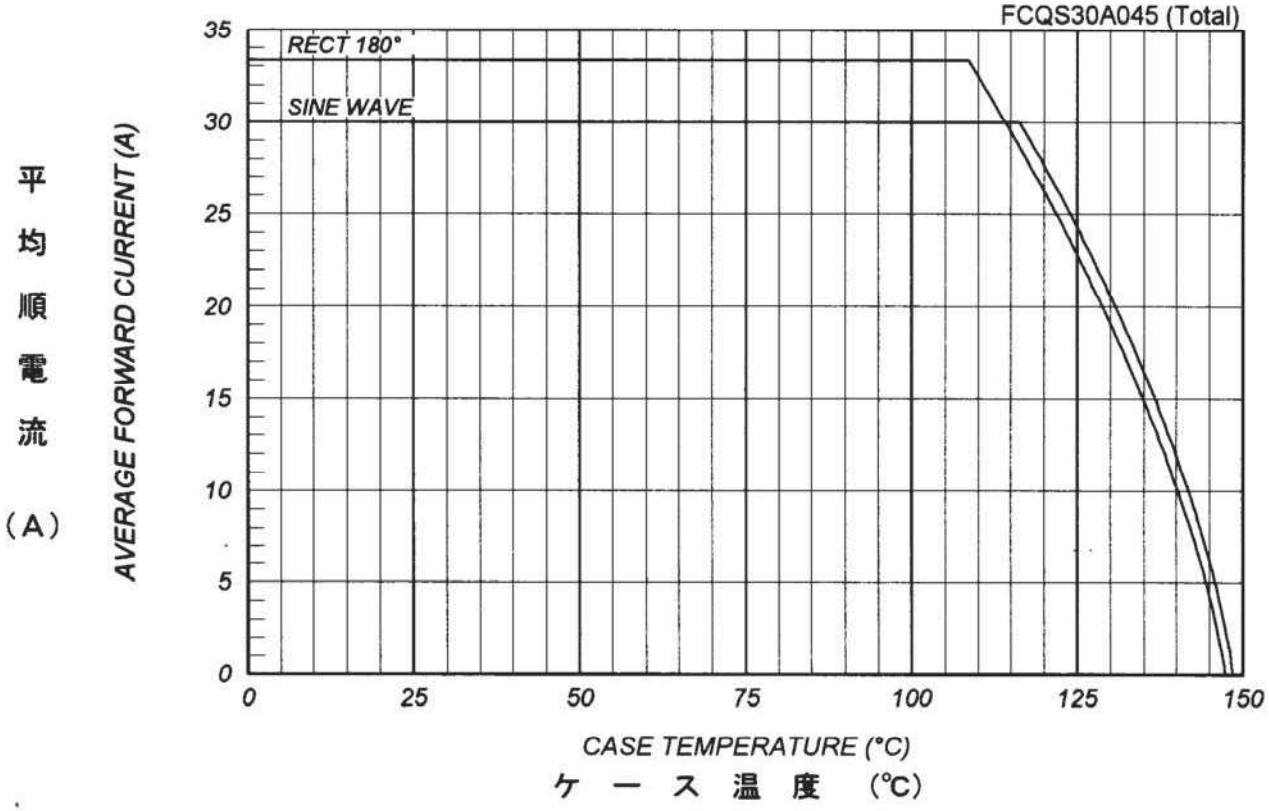
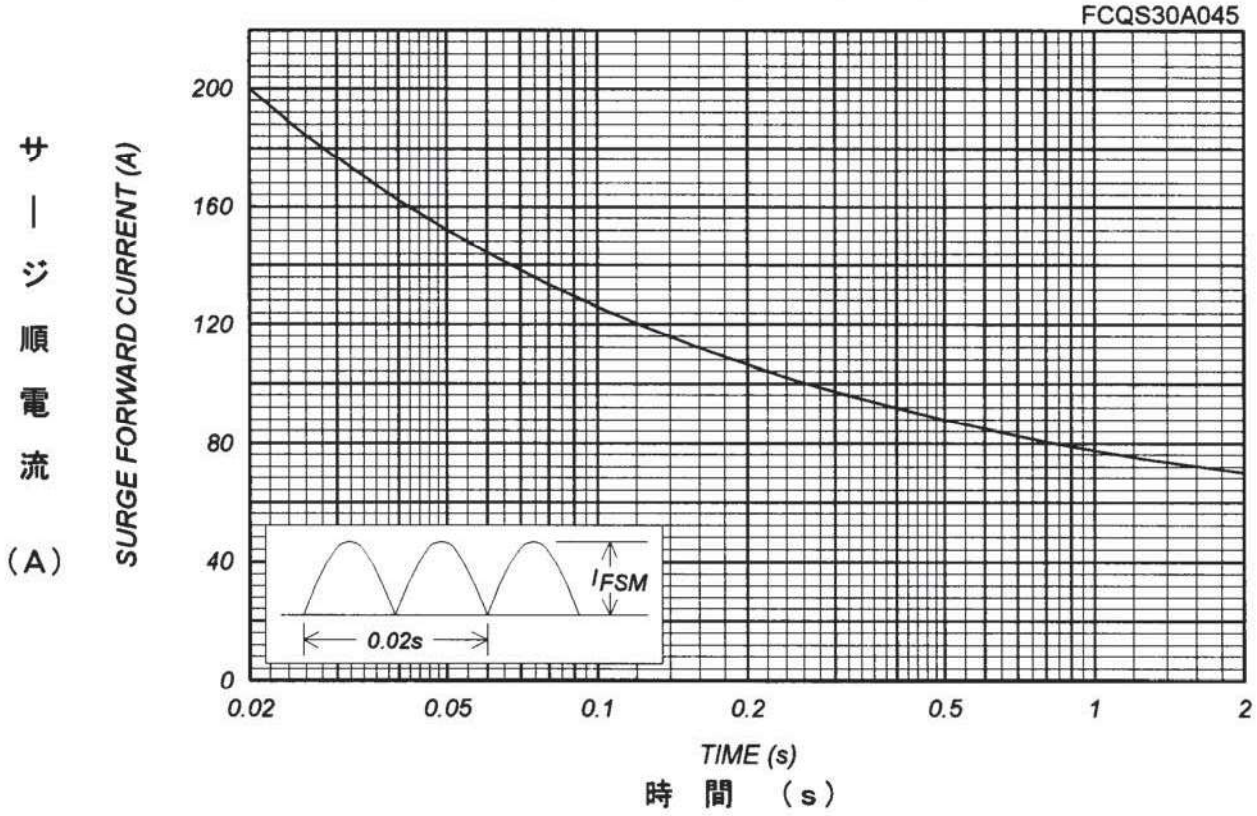
AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

V_{RM}=20V



サ ー ジ 順 電 流 定 格
SURGE CURRENT RATINGS

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



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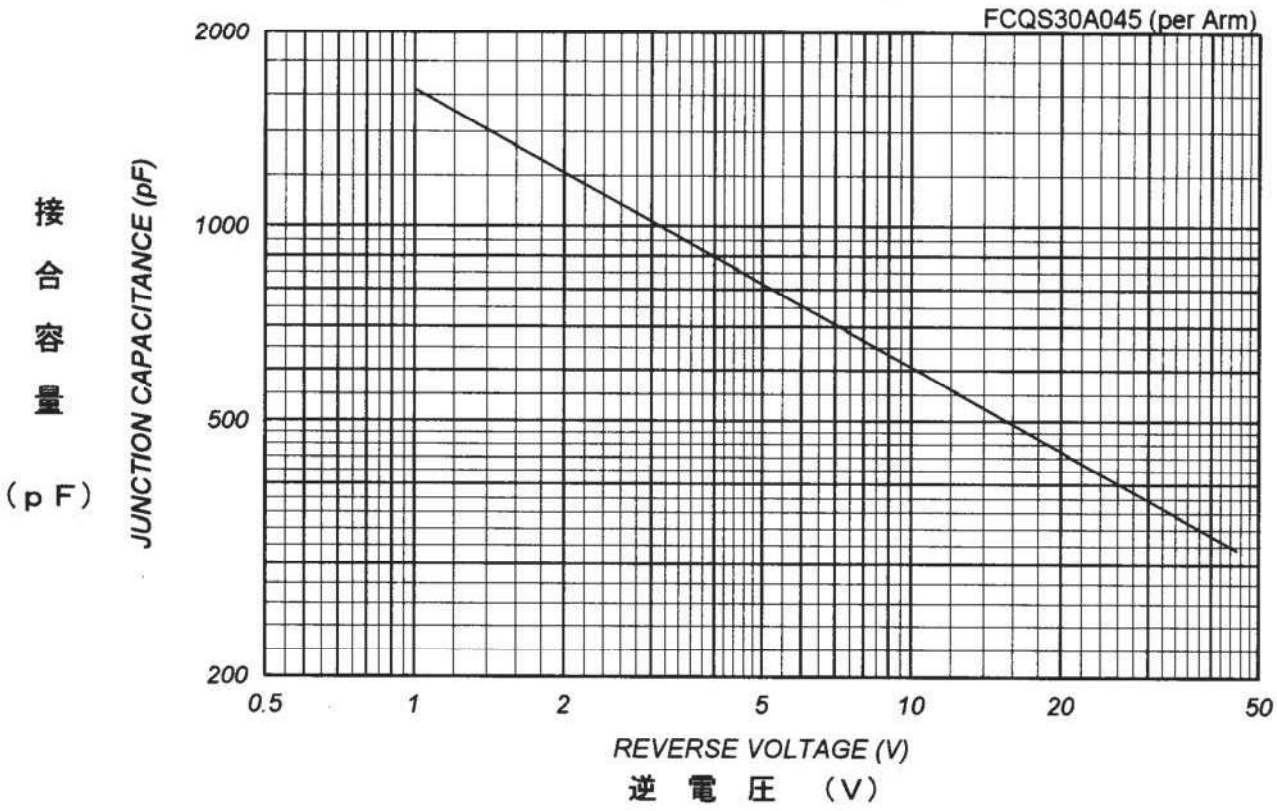
接 合 容 量 特 性
JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

Tj=25°C, Vm=20mV$_{RMS}$, f=100kHz, Typical Value



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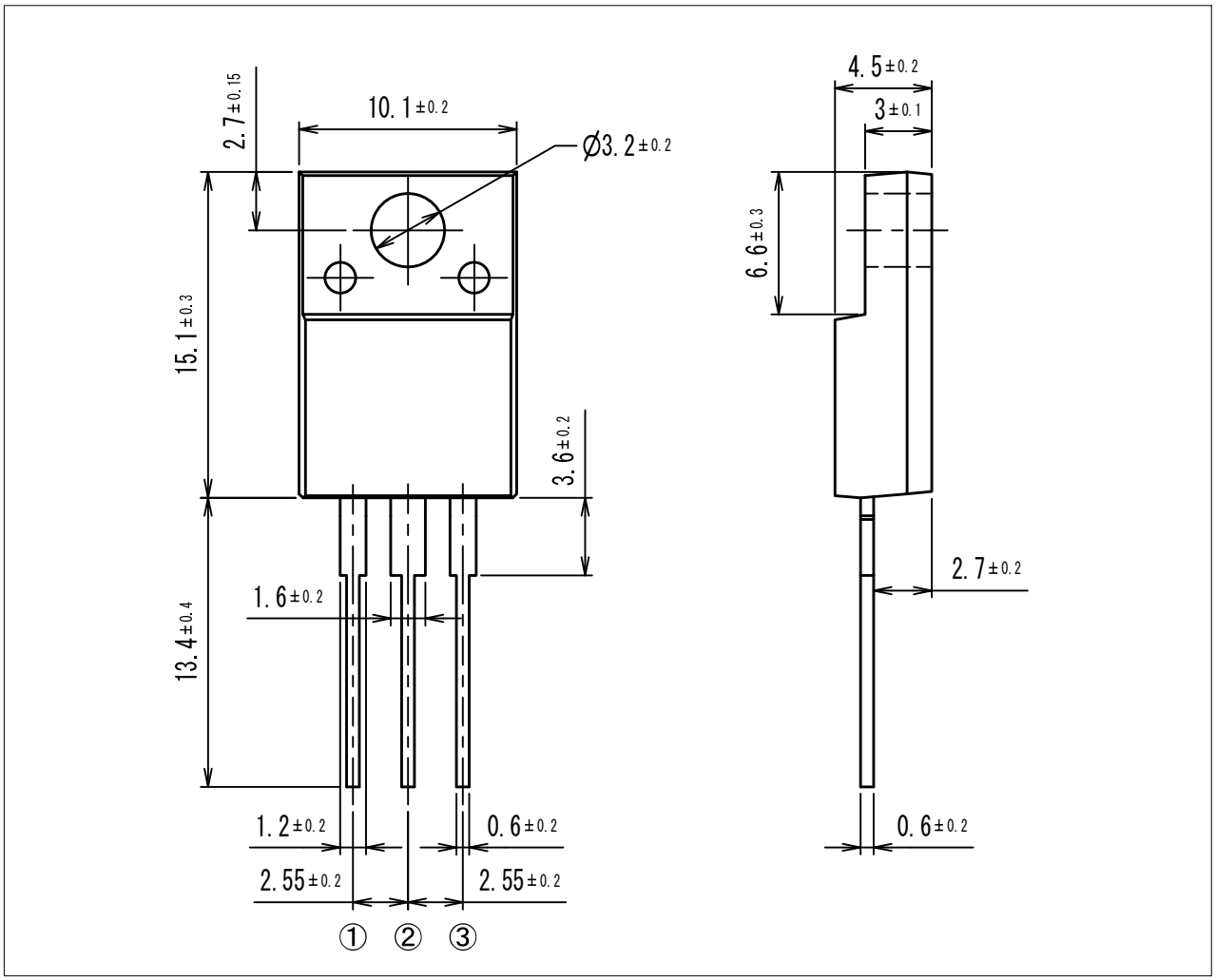

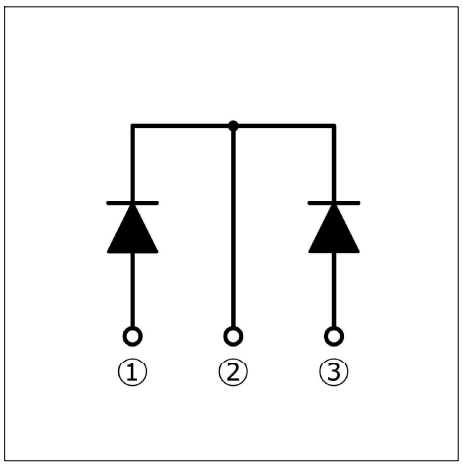

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