

**New**

# For PFC and other applications 600V FREDs

## ● 特 徴 / Features

- ・ソフトリカバリーによるロー EMI  
Low EMI due to soft reverse recovery
- ・低い高周波動作時損失  
Low high-frequency operating dissipation
- ・小さなtrr温度係数  
Small temperature coefficient of trr
- ・低い順回復電圧  
Low forward transient voltage



◎ In full production

○ ES Sample Availability

## 標準シリーズ / Standard series

Part Number		Package	I <sub>FAV</sub> (A)	I <sub>FSM</sub> (A)	V <sub>FM</sub> (V) 25°C	I <sub>RM</sub> (mA) 25°C	T <sub>jmax</sub> (°C)	trr (ns)	Availability
EPO4RA60	S	SOD-123	0,4	8	1,32	0,01	150	40	◎
EC8FS6	S	SMA	0,8	20	1,32	0,02	150	80	◎
20NFB60	S	Axial	2	50	1,58	0,01	150	35	◎
30PFB60	S	Axial	3	45	1,7	0,02	150	35	◎
NSF03B60	S	nSMC	3	45	1,7	0,02	150	35	◎
NSF03E60	S	nSMC	3	60	1,28	0,02	150	75	◎
ESF03B60	S	TO-251	3	45	1,7	0,02	150	35	◎
ESF03B60-F	S	TO-252	3	45	1,7	0,02	150	35	◎
FSF03B60	S	TO-220F-2pin	3	60	1,7	0,02	150	35	◎
FSF03UB60	S	TO-220F-2pin	3	60	1,7	0,02	150	35	◎
FSF05B60	S	TO-220F-2pin	5	80	1,7	0,03	150	40	◎
GSF05B60	S	TO-220-2pin	5	80	1,7	0,03	150	40	◎
TSF05B60	S	TO-263	5	80	1,7	0,03	150	40	◎
TSF05B60-11A	S	TO-262-2pin	5	80	1,7	0,03	150	40	◎
FSF10B60	S	TO-220F-2pin	10	120	1,8	0,03	150	50	◎
FSF10B60B	S	TO-220F	10	120	1,8	0,03	150	50	◎
KSF30A60B	S	TO-247	30	400	1,7	0,05	150	60	◎
KSF30A60E	S	Modified TO-247	30	400	1,7	0,05	150	60	◎
KSF60A60B	S	TO-247	60	600	1,7	0,05	150	75	◎
ECF06B60	KC	TO-251	3A×2	45	1,7	0,02	150	35	◎
ECF06B60-F	KC	TO-252	3A×2	45	1,7	0,02	150	35	◎
FCF06B60	KC	TO-220F	3A×2	60	1,7	0,02	150	35	◎
GCF06B60	KC	TO-220	3A×2	60	1,7	0,02	150	35	◎
FCF10B60	KC	TO-220F	5A×2	80	1,7	0,03	150	40	◎
TCF10B60	KC	TO-263	5A×2	80	1,7	0,03	150	40	◎
TCF10B60-11A	KC	TO-262	5A×2	80	1,7	0,03	150	40	◎
FCF20B60	KC	TO-220F	10A×2	120	1,8	0,03	150	50	◎
TCF20B60-11A	KC	TO-262	10A×2	120	1,8	0,03	150	50	◎
TCF20B60	KC	TO-263	10A×2	120	1,8	0,03	150	50	◎
KCF20B60	KC	TO-247	10A×2	120	1,8	0,03	150	50	◎

URL : <http://www.niec.co.jp/>

 **Nihon Inter Electronics Corporation**

The value would changed without notice.  
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◎ In full production ○ ES Sample Availability

**低VFシリーズ** ※PFC不連続モード(臨界モード)に最適  
**Lower Vf series, optimize for discontinuous mode of PFC**

	Part Number	Package	I <sub>FAV</sub> (A)	I <sub>FSM</sub> (A)	V <sub>FM</sub> (V) 25°C	I <sub>RM</sub> (mA) 25°C	T <sub>Jmax</sub> (°C)	trr (ns)	Availability	
<b>New</b>	30PFD60	S	3	45	1.45	0.02	150	45	◎	
<b>New</b>	NSF03D60	S	nSMC	3	45	1.45	0.02	150	45	◎
<b>New</b>	NSF03E60	S	nSMC	3	60	1.28	0.02	150	75	◎
<b>New</b>	FSF03D60	S	TO-220F-2pin	3	50	1.45	0.02	150	45	◎
In Development	FSF03E60	S	TO-220F-2pin	3	50	1.05 typ.	0.02	150	50 typ.	※ ○
<b>New</b>	FSF05D60	S	TO-220F-2pin	5	80	1.47	0.02	150	65	◎
In Development	FSF05E60	S	TO-220F-2pin	5	90	1.05 typ.	0.02	150	60 typ.	※ ○
<b>New</b>	FSF10D60	S	TO-220F-2pin	10	120	1.5	0.03	150	75	◎
In Development	FSF10E60	S	TO-220F-2pin	10	140	1.10 typ.	0.03	150	80 typ.	※ ○
<b>New</b>	FCF06D60	KC	TO-220F	3A×2	50	1.45	0.02	150	45	◎
In Development	FCF06E60	KC	TO-220F	3A×2	50	1.05 typ.	0.02	150	50 typ.	※ ○
<b>New</b>	FCF10D60	KC	TO-220F	5A×2	80	1.47	0.02	150	65	◎
In Development	FCF10E60	KC	TO-220F	5A×2	90	1.05 typ.	0.02	150	60 typ.	※ ○
<b>New</b>	FCF20D60	KC	TO-220F	10A×2	120	1.5	0.03	150	75	◎
In Development	FCF20E60	KC	TO-220F	10A×2	140	1.10 typ.	0.03	150	80 typ.	※ ○

◎ In full production ○ ES Sample Availability

**超高速シリーズ** ※PFC連続モードに最適  
**Ultra-Fast series, optimize for continuous mode of PFC**

	Part Number	Package	I <sub>FAV</sub> (A)	I <sub>FSM</sub> (A)	V <sub>FM</sub> (V) 25°C	I <sub>RM</sub> (mA) 25°C	T <sub>Jmax</sub> (°C)	trr (ns)	Availability	
	30PUA60	S	Axial	3	55	2.35	0.02	150	32	◎
	30PUB60	S	Axial	3	45	2.7	0.02	150	27	◎
	NSU03A60	S	nSMC	3	35	2.3	0.02	150	32	◎
	NSU03B60	S	nSMC	3	35	2.7	0.02	150	27	◎
	TSU05A60	S	TO-263	5	70	2.3	0.03	150	35	◎
	TSU05B60	S	TO-263	5	60	2.7	0.03	150	30	◎
In Development	FSU05C60	S	TO-220F-2pin	5	50	2.8 typ.	0.01 typ.	150	17 typ.	※ ○
<b>New</b>	FSU08C60	S	TO-220F-2pin	8	80	3.2	0.01	150	35	※ ○
	FSU10A60	S	TO-220F-2pin	10	110	2.3	0.03	150	45	◎
	FSU10U60	S	TO-220F-2pin	10	110	2.3	0.03	150	45	◎
	FSU10B60	S	TO-220F-2pin	10	100	2.7	0.03	150	40	◎
	TSU10A60	S	TO-263	10	110	2.3	0.03	150	45	◎
	TSU10B60	S	TO-263	10	100	2.7	0.03	150	40	◎
In Development	FSU12C60	S	TO-220F-2pin	12	130	2.5 typ.	0.01 typ.	150	29 typ.	※ ○
	FSU20A60	S	TO-220F-2pin	15	170	2.3	0.03	150	55	◎
	FSU20B60	S	TO-220F-2pin	15	160	2.6	0.03	150	50	◎
	ECU06B60	KC	TO-251	3A×2	35	2.7	0.02	150	27	◎
	ECU06B60-F	KC	TO-252	3A×2	35	2.7	0.02	150	27	◎
	FCU06B60	KC	TO-220F	3A×2	35	2.7	0.02	150	27	◎
In Development	FCU10C60	KC	TO-220F	5A×2	50	2.8 typ.	0.01 typ.	150	17 typ.	※ ○
	FCU10B60	KC	TO-220F	5A×2	60	2.7	0.03	150	30	◎
	FCU10B60	KC	TO-220F	5A×2	60	2.7	0.03	150	30	◎
	TCU10A60	KC	TO-263	5A×2	70	2.3	0.03	150	35	◎
	TCU10A60-11A	KC	TO-262	5A×2	70	2.3	0.03	150	35	◎
	TCU10B60	KC	TO-263	5A×2	60	2.7	0.03	150	30	◎
	TCU10B60-11A	KC	TO-262	5A×2	60	2.7	0.03	150	30	◎
In Development	FCU16C60	KC	TO-220F	8A×2	80	2.6 typ.	0.01 typ.	150	20 typ.	※ ○
	FCU20A60	KC	TO-220F	10A×2	110	2.3	0.03	150	45	◎
	FCU20B60	KC	TO-220F	10A×2	100	2.7	0.03	150	40	◎
	TCU20A60-11A	KC	TO-262	10A×2	110	2.3	0.03	150	45	◎
	TCU20A60	KC	TO-263	10A×2	110	2.3	0.03	150	45	◎
	TCU20B60-11A	KC	TO-262	10A×2	100	2.7	0.03	150	40	◎
	TCU20B60	KC	TO-263	10A×2	100	2.7	0.03	150	40	◎
In Development	KCU16C60	KC	TO-247	8A×2	80	2.6 typ.	0.01 typ.	150	20 typ.	※ ○
	KCU20A60	KC	TO-247	10A×2	110	2.3	0.03	150	45	◎
	KCU20B60	KC	TO-247	10A×2	100	2.7	0.03	150	40	◎