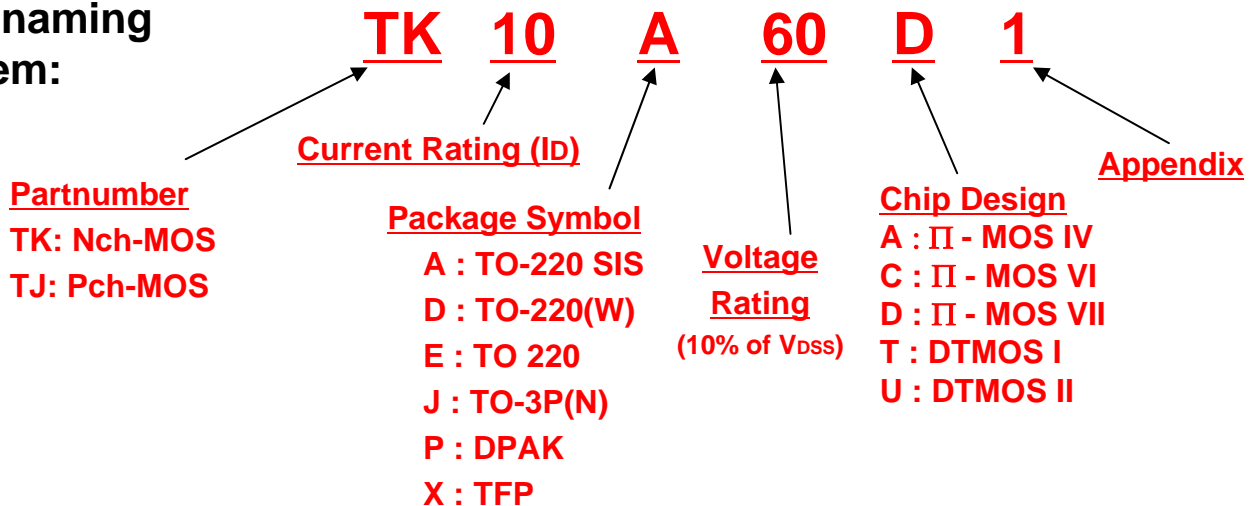


## Key product families:

DTMOS : Super Junction style MOSFET -> lower  $R_{DS(on)}$  &  $Q_g$   
 II-MOS VII: Standard MOSFET -> with low  $Q_g$  and capacitance

## New naming system:



## DTMOS II

➤ the way to maximize efficiency, whilst minimizing package size...

### Characteristics

$V_{DS}$ : 600V & 650V,  $I_D$ =12~50A,  $R_{DS(on)}$  =0.065~0.4Ohm

Packages: pls see opposite page

### Features

lowest  $Q_g^* R_{DS(on)}$  at market => high efficiency + simple to drive  
 low  $R_{on}$  by Super Junction style structure  
 low gate capacitance  
 guaranteed avalanche durability  
 high ruggedness concept

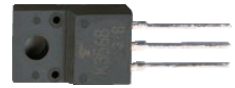
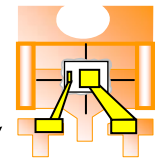
### Application: SMPS Main Switch & PFC, Lamp Ballast

$V_{DS}$	Partnumber	Chip Design	$I_D$	$R_{DS(on)}$ max/ Ohm	$Q_g$	Packages	Status
600V	TK50J60U	DTMOS II	50A	0.065	70nC	TO-3P(N)	Sample
600V	TK40J60T	DTMOS I	40A	0.08	67nC	TO-3P(N)	MP
600V	TK20J60U	DTMOS II	20A	0.19	27nC	TO-3P(N)	MP
600V	TK20A60U	DTMOS II	20A	0.19	27nC	TO220SIS	MP
600V	TK20D60U	DTMOS II	20A	0.19	27nC	TO220W	MP
600V	TK20E60U	DTMOS II	20A	0.19	27nC	TO220	MP Q2'10
600V	TK20X60U	DTMOS II	20A	0.19	27nC	TFP (SMD)	MP
600V	TK15J60U	DTMOS II	15A	0.3	17nC	TO-3P(N)	MP
600V	TK15A60U	DTMOS II	15A	0.3	17nC	TO220SIS	MP
600V	TK15D60U	DTMOS II	15A	0.3	17nC	TO220W	MP
600V	TK15E60U	DTMOS II	15A	0.3	17nC	TO220	MP Q2'10
600V	TK15X60U	DTMOS II	15A	0.3	17nC	TFP (SMD)	MP
600V	TK12J60U	DTMOS II	12A	0.4	14nC	TO-3P(N)	MP
600V	TK12A60U	DTMOS II	12A	0.4	14nC	TO220SIS	MP
600V	TK12D60U	DTMOS II	12A	0.4	14nC	TO220W	MP
600V	TK12E60U	DTMOS II	12A	0.4	14nC	TO220	MP Q2'10
600V	TK12X60U	DTMOS II	12A	0.4	14nC	TFP (SMD)	MP
650V	TK13A65U	DTMOS II	13A	0.38	17nC	TO220SIS	MP

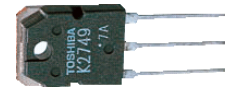
## II -MOS VII Standard Technology: 500~650V Class

**Features:** fine split of  $V_{DS}$  and  $R_{DS(on)}$  available  
 very low  $Q_g$  and capacitance values -> simple to drive  
 high ruggedness (proved by 100% production test)  
 latest process = excellent cost performance ratio  
 TO220SIS & TO220(W) with advanced copper connector

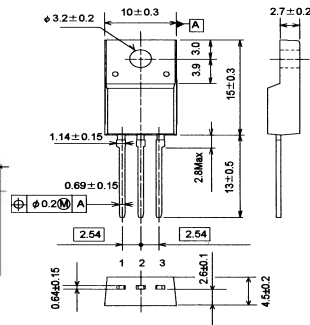
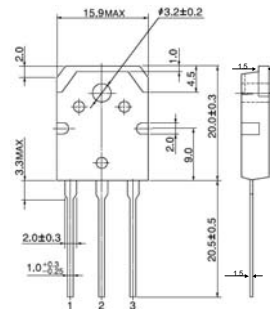
$V_{DS}(V)$	Product Name	$I_D(A)$	$R_{DS(ON)} \text{ max}$	Predecessor	Package
500	TK4P50D	4	2.0	-	DPAK
	TK5P50D	5	1.5	2SK4103	DPAK
	TK5A50D	5	1.5	2SK3563	TO-220 SIS
	TK7P50D	7	1.22	-	DPAK
	TK8A50DA	7.5	1.0	-	TO-220 SIS
	TK8A50D	8	0.85	2SK3561	TO-220 SIS
	TK10A50D	10	0.72	-	TO-220 SIS
	TK12A50D	12	0.52	2SK3568	TO-220 SIS
	TK13A50DA	12.5	0.47	-	TO-220 SIS
	TK13A50D	13	0.4	2SK4012	TO-220 SIS
	TK15J50D	15		2SK4107	TO-3P(N)
	TK15A50D	15	0.3	2SK3934	TO-220 SIS
525	TK5P53D	5	1.5	-	DPAK
	TK6P53D	6	1.3	-	DPAK
550	TK5A55D	5	1.7	-	TO-220SIS
	TK6A55DA	5.5	1.48	-	TO-220SIS
	TK8A55DA	7.5	1.07	-	TO-220SIS
	TK9A55DA	8.5	0.86	-	TO-220SIS
	TK12A55D	12	0.57	-	TO-220SIS
	TK12J55D	12		-	TO-3P(N)
	TK16J55D	16	0.37	-	TO-3P(N)
600	TK2P60D	2	4.3	-	new PW-Mold (DPAK style)
	TK3A60DA	2.5	2.8	-	TO-220 SIS
	TK4A60DA	3.5	2.2	2SK3567	TO-220 SIS
	TK4P60DA	3.5	2.2	-	DPAK
	TK4A60DB	3.7	2	-	TO-220 SIS
	TK4P60DB	3.7	2	-	DPAK
	TK4A60D	4	1.7	-	TO-220 SIS
	TK6A60D	6	1.25	2SK3562	TO-220 SIS
	TK8A60DA	7.5	1.0	2SK3667	TO-220 SIS
	TK10A60D	10	0.75	2SK3569	TO-220 SIS
	TK11A60D	11	0.65	-	TO-220 SIS
	TK12A60D	12	0.55	-	TO-220 SIS
	TK13A60D	13	0.43	2SK3797	TO-220 SIS
650	TK15A60D	15	0.37	-	TO-220 SIS
	TK5A65D	5	1.43	-	TO-220 SIS
	TK6A65D	6	1.11	-	TO-220 SIS
	TK8A65D	8	0.84	-	TO-220 SIS



TO-220SIS



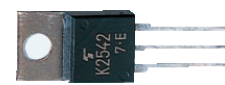
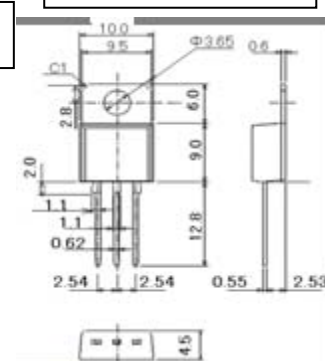
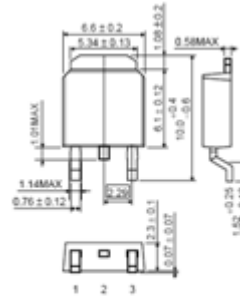
TO-3P(N)



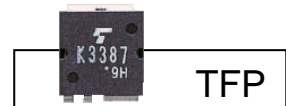
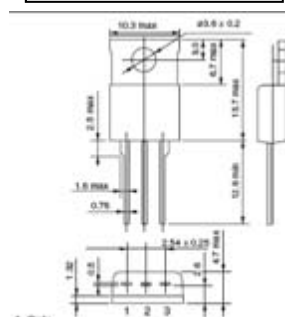
TO-220(W)



DPAK



TO-220AB



TFP



1. Gate  
2. Drain (Heat Sink)  
3. Source

1. Drain (Heat Sink)  
2. Gate  
3. Source1  
4. Source2