

# POWER MOSFET

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## 1. Can be used with automatic placement machine.

Available in various packages with taping for automatic placement.

## 2. MOSFETs operating from 4 volts

These MOSFETs can be directly driven by an IC, saving counts of components (buffer transistors)

## 3. Low on-resistance

Optimized pattern design for low on-resistance.

2SK2262 (ROHM : 60V, 2A)  $R_{DS(ON)} : 0.35\Omega$  (Max.)

Old MOSFETs of the same type (60V, 2A)  $R_{DS(ON)} : 0.4 \sim 0.65\Omega$  (Max.)

## 4. High-speed switching

New process decreases input capacitance (ciss) which increases switching speed.

2SK1976 (ROHM : 450V, 5A)  $t_{on} : 25ns$  (Typ.) ,  $t_{off} : 85ns$  (Typ.)

Old MOSFETs of the same type (450V, 5A)  $t_{on} : 30ns$  (Typ.) ,  $t_{off} : 90ns$  (Typ.)

## 5. Availability

Approx, 2 millions per month.

## Quick reference

$V_{DS}$ (V)	30	60	100	200	250	450	500	600	800	900
2		2SK2094 (CPT) 2SK2262 (MRT)	2SK2105 (CPT)							
3	2SK2429 (MRT) 2SK2430 (CPT)	2SK2306 (CPT)						2SK2295 (TO-220FP)	2SK2294 (TO-220FP)	2SK2293 (TO-220FP)
4										
5		2SK2104 (CPT) 2SK2106 (TO-220FP) 2SK2302 (HRT)		2SK2459 (TO-220FP)	2SK2460 (TO-220FP)	2SK1976 (TO-220FP) 2SK2263 (TO-247)	2SK2176 (TO-220FP)			
7						2SK2299 (TO-220FP)	2SK2298 (TO-220FP)			
10	2SK2427 (TO-220FP)	2SK2095 (TO-220FP) 2SK2304 (TO-220FP)	2SK2428 (TO-220FP) 2SK2303 (TO-220FP)			2SK1975 (TO-247)				
15		2SK2300 (TO-220FP)								

## CPT · MRT · HRT · TO-220FP · TO-247

Application	Package					$V_{DS}$	$I_D$ (A)	$P_D$ (W)			$R_{DS(ON)}$ Typ. ( $\Omega$ )	$V_{GS}$ (V)	$I_D$ (A)
	CPT	MRT	HRT	TO-220FP	TO-247			MRT HRT	CPT TO-220FP TO-247	( $T_a=25^\circ C$ ) ( $T_c=25^\circ C$ )			
	Part No.												
Switching	2SK2430	2SK2429	—	—	—	30	3	1.2	20	0.125	10	1.5	
	—	—	—	2SK2427	—	30	10	—	30	0.052	10	5	
	2SK2094	2SK2262	—	—	—	60	2	1.2	20	0.30	10	1	
	2SK2306	—	—	—	—	60	3	—	20	0.15	10	1.5	
	2SK2104	—	2SK2302	2SK2106	—	60	5	1.8	20	0.115	10	2.5	
	—	—	—	2SK2095	—	60	10	—	30	0.080	10	5	
	—	—	—	2SK2304	—	60	10	—	30	0.085	10	5	
	—	—	—	2SK2300	—	60	15	—	30	0.045	10	7.5	
	2SK2105	—	—	—	—	100	2	—	20	0.30	10	1	
	—	—	—	2SK2428	—	100	10	—	30	0.16	10	5	
	—	—	—	2SK2303	—	100	10	—	30	0.080	10	5	
	—	—	—	2SK2459	—	200	5	—	30	0.45	10	2.5	
	—	—	—	2SK2460	—	250	5	—	30	0.55	10	2.5	
	—	—	—	2SK1976	2SK2263	450	5	—	30	1.0	10	2.5	
	—	—	—	2SK2299	—	450	7	—	30	0.9	10	4	
	—	—	—	—	2SK1975	450	10	—	80	0.6	10	5	
	—	—	—	2SK2176	—	500	5	—	30	1.1	10	2.5	
	—	—	—	2SK2298	—	500	7	—	30	1.0	10	4	
	—	—	—	2SK2295	—	600	4	—	30	1.8	10	2	
	—	—	—	2SK2294	—	800	3	—	30	3.0	10	1.5	
—	—	—	2SK2293	—	900	3	—	30	4.0	10	1.5		

Note : ☆Under development

## ●Product Designation

- When ordering, specify the type.
- Check each code against the tables shown below.
- Fill a space with the next character.



Part No.


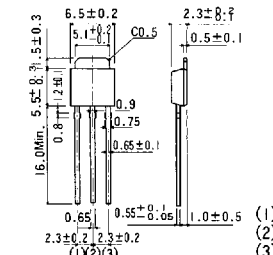

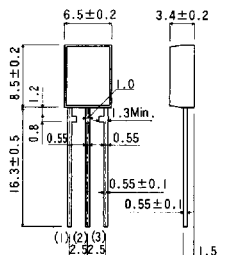

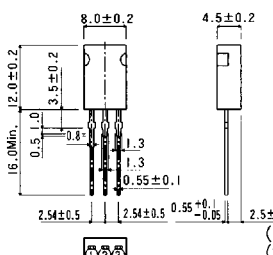

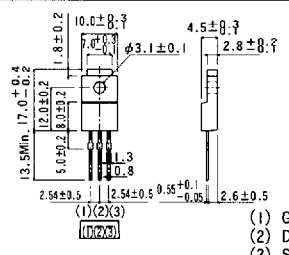

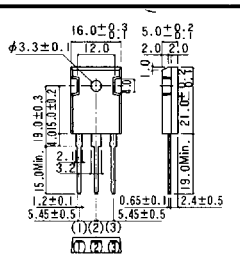
Special code

- Omit for standard product.
- Factory assigned for custom product.

Packaging

Package	Code	Packaging specifications	Quantity/Package (pcs)
CPT	None	Bulk	1,000
MRT	T105	Ammo box	2,000
HRT	T114	Ammo box	1,000
TO-220FP	None	Bulk	1,000
	C7	Tube	500 (50pcs × 20)
TO-247	None	Bulk	200
	F31	Packed in forming tray	500

(Unit : mm)

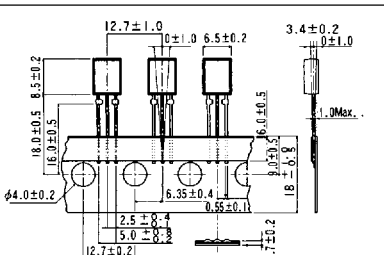
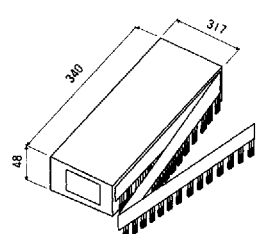
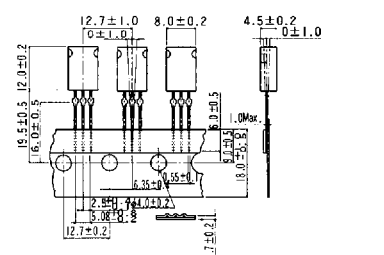
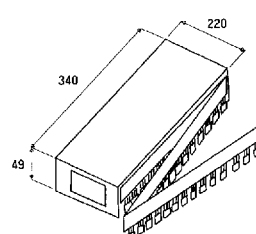
<p><b>CPT</b></p>  <p>(×0.5)</p>	 <p>6.5±0.2 5.1±0.2 0.9 0.75 0.65±0.1 16.0Min. 5.5±0.7 1.2Min. 2.3±0.2 2.3±0.2 (1)(2)(3) 0.65 0.55±0.05 1.0±0.5 2.3±0.2 2.3±0.2 (1) Gate (2) Drain (3) Source</p>	<p><b>MRT</b></p>  <p>(×0.5)</p>	 <p>6.5±0.2 3.4±0.2 8.5±0.2 1.0 1.2 1.3Min. 0.8 0.55 0.55±0.1 16.3±0.5 0.55±0.1 2.3±0.5 (1)(2)(3) (1) Source (2) Drain (3) Gate</p>
<p><b>HRT</b></p>  <p>(×0.5)</p>	 <p>8.0±0.2 4.5±0.2 12.0±0.2 3.5±0.2 16.0Min. 0.5 0.8 1.3 1.3 0.55±0.1 2.54±0.5 2.54±0.5 0.55±0.1 2.5±0.5 (1) Gate (2) Drain (3) Source</p>	<p><b>TO-220FP</b></p>  <p>(×0.5)</p>	 <p>10.0±0.2 4.5±0.2 1.8±0.2 φ3.1±0.1 2.8±0.2 13.5Min. 17.0±0.2 1.3 1.3 12.0±0.2 5.0±0.2 1.3 1.3 2.54±0.5 2.54±0.5 0.55±0.1 2.6±0.5 (1)(2)(3) (1) Gate (2) Drain (3) Source</p>
<p><b>TO-247</b></p>  <p>(×0.5)</p>  <p>16.0±0.2 5.0±0.2 φ3.3±0.2 12.0 2.0±0.2 15.0Min. 13.0±0.3 1.0±0.2 1.0±0.2 1.2±0.1 0.65±0.1 12.4±0.5 5.45±0.5 5.45±0.5 (1)(2)(3) (1) Gate (2) Drain (3) Source</p>			

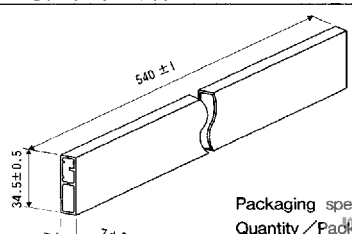
POWER MOSFET Transistors

The Class and basic ordering units for Standard and Semi-Standard Products Units

●Packaging

(Unit : mm)

<p><b>MRT Taping</b></p>  <p>12.7±1.0 0±1.0 6.5±0.2 3.4±0.2 16.0±0.5 8.5±0.2 1.0Max. 64.0±0.2 16.0±0.5 6.0±0.5 18±0.3 2.5±0.4 6.35±0.4 0.55±0.1 12.7±0.2 0.7±0.2</p>	<p><b>MRT Ammo box</b></p>  <p>340 317 48</p>
<p><b>HRT Taping</b></p>  <p>12.7±1.0 8.0±0.2 4.5±0.2 16.5±0.5 12.0±0.2 0±1.0 0±1.0 16.0±0.5 8.0±0.5 1.0Max. 64.0±0.2 16.0±0.5 6.0±0.5 18±0.3 2.5±0.4 6.35±0.4 0.55±0.1 12.7±0.2 0.7±0.2</p>	<p><b>HRT Ammo box</b></p>  <p>340 220 49</p>

<p><b>TO-220FP Container tube</b></p>  <p>540 ±1 34.5±0.5 7±0.5</p> <p>Packaging specification code : C7 Quantity / Package : 50pcs</p>
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