

3. π -MOS III $\cdot^5$ ($V_{DSS}=250\sim600V$ type)

High withstanding series, well suited for applications with Ballast and AC=100V IN switching power supplies.

- Guaranteed $V_{GSS} = \pm 30V$ for all types
- Improved high withstanding characteristics by optimizing the cell configuration
- Large current and low on-resistance. 2SK1544 : $V_{DSS} = 500V$, $I_D = 25A$, $R_{DS(ON)} = 0.2\Omega$ MAX.

Application	Type No.	Maximum ratings			Package	R _{DS(ON)}				V _{th} @ I _b =1mA (V)
		I _b (A)	V _{DSS} (V)	P _D (W)		(Ω)		V _{GS} (V)	I _b (A)	
						TYP.	MAX.			
Ballast motor drive UPS	○2SK2146	2	250	25	TO-220(NIS)	1.2	2.0	10	1	2.0~4.0
	*○2SK2230	2	250	1.2	TPS	1.2	2.0	10	1	2.0~4.0
	*○2SK2235	2	250	20	POWER-MOLD	1.2	2.0	10	1	2.0~4.0
	○2SK1766	10	250	40	TO-220(NIS)	0.4	0.6	10	5	1.5~3.5
	○2SK1486	32	300	200	TO-3P(L)	0.08	0.095	10	16	2.0~4.0
AC115V Switching power supply	○2SK1854	6	400	40	TO-220(NIS)	0.8	1.0	10	2.5	1.5~3.5
	○2SK1805	7	500	45	TO-220(NIS)	0.78	0.85	10	4	2.0~4.0
	○2SK1574	8	500	125	TO-220AB	0.78	0.85	10	4	2.0~4.0
	○2SK1864	8	500	100	TO-220FL/SM	0.78	0.85	10	4	2.0~4.0
	○2SK1651	8	500	80	TO-3P(IS)	0.80	1.00	10	5	2.0~4.0
	2SK1487	10	450	125	TO-3P(N)	0.64	1.00	10	5	2.0~4.0
	○2SK1488	10	500	125	TO-3P(N)	0.80	1.00	10	5	2.0~4.0
	○2SK1855	12	500	125	TO-3P(N)	0.55	0.70	10	6	2.0~4.0
	○2SK1865	12	500	100	TO-220FL/SM	0.55	0.70	10	6	2.0~4.0
	2SK1531	15	500	150	TO-3P(N)	0.38	0.45	10	7	2.0~4.0
	○2SK1745	18	500	150	TO-3P(N)	0.29	0.36	10	9	2.0~4.0
	2SK1544	25	500	200	TO-3P(L)	0.15	0.20	10	13	1.5~3.5
	○2SK1767	3.5	600	40	TO-220(NIS)	2.1	2.5	10	2.5	2.1~4.0
	○2SK1913	4	600	40	TO-220(NIS)	0.9	1.8	10	2.5	2.1~4.0

*: Under development ○: Built-in High Strength diode

4. π -MOS IV ($V_{DSS}=500V$ type) (Under development)

High speed series, well suited for applications with AC 100V IN switching power supplies.

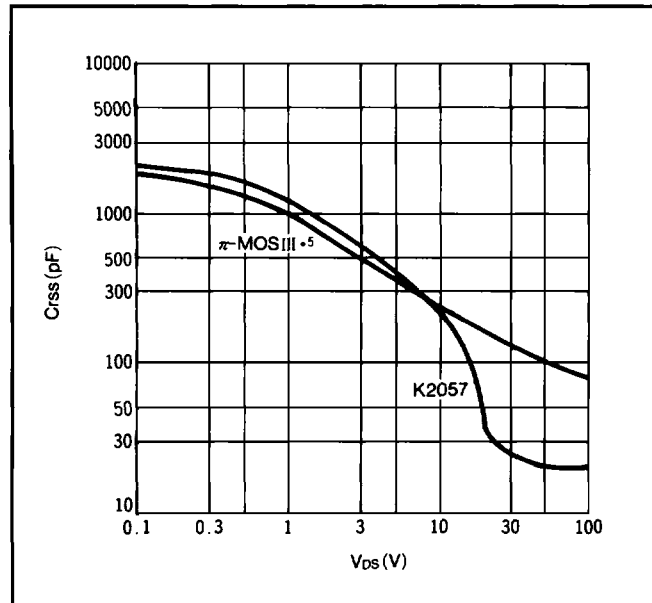
- 15% less on-resistance per unit area (In comparison with $R_{DS(ON)}$ MAX.)
- High speed, small power loss (tf speed up 25%, power loss 30% down)
- Guaranteed $V_{GSS} = \pm 30V$ for all types
- Improved high withstanding characteristics by optimizing the cell configuration
- Built-in zener diode for protection between the gate and spirc

Application	Type No.	Maximum ratings			Package	R _{DS(ON)}				V _{th} @ I _D =1mA (V)	Q _g (TYP.) (nc)
		I _D (A)	V _{DSS} (V)	P _D (W)		(Ω)		V _{GS} (V)	I _D (A)		
						TYP.	MAX.				
AC115V Switching power Supply	2SK2236	5	500	40	TO-220(NIS)	1.2	1.6	10	2.5	2.0~4.0	17
	2SK2237	7	500	45	TO-220(NIS)	0.6	0.8	10	4	2.0~4.0	30
	2SK2149	10	500	125	TO-3P(N)	0.6	0.8	10	5	2.0~4.0	30
	2SK2150	15	500	150	TO-3P(N)	0.29	0.4	10	7	2.0~4.0	50
	2SK2057	20	500	150	TO-3P(N)	0.24	0.31	10	10	2.0~4.0	65

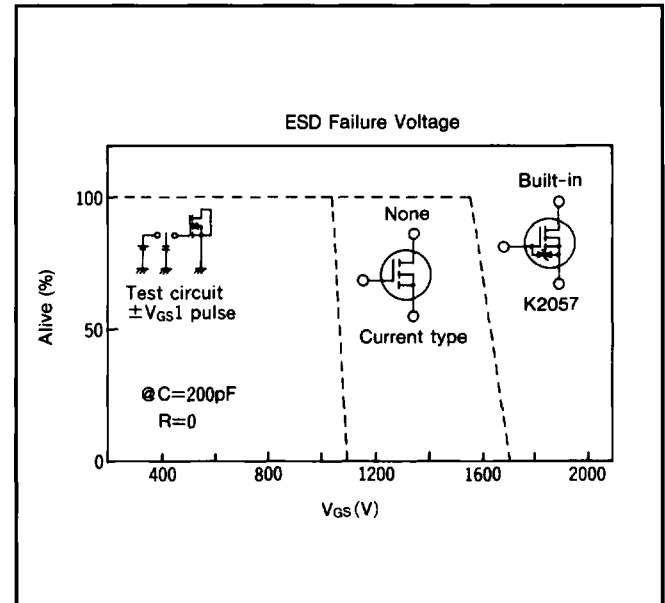
Power MOS FET Lineup [Characteristics Chart]

Features of π -MOS IV

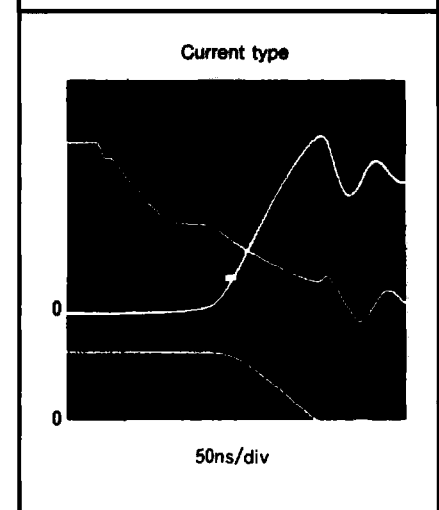
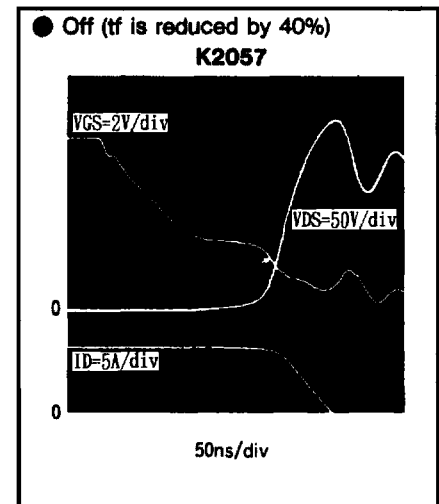
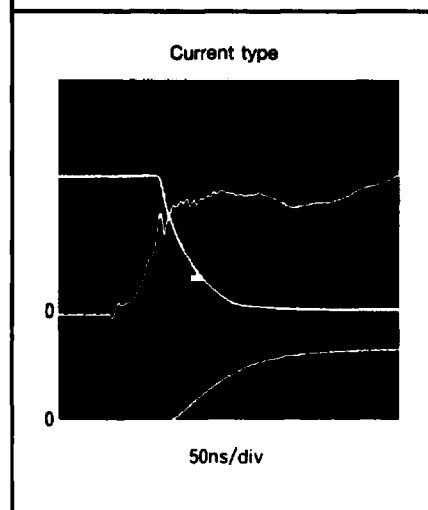
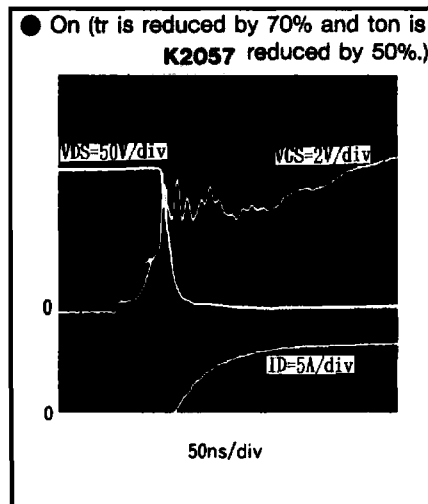
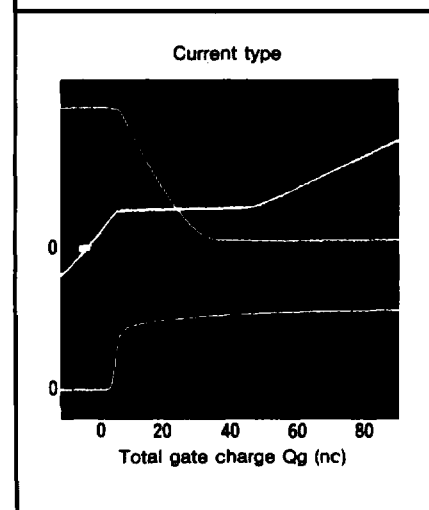
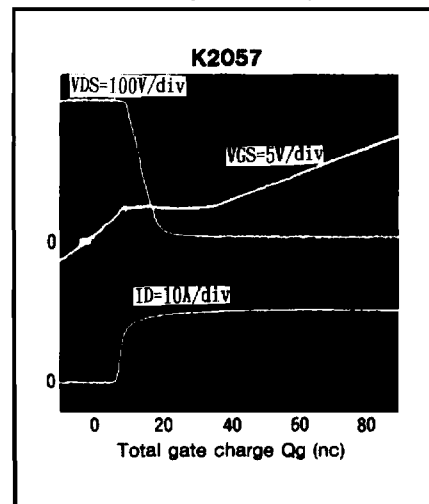
(1) Reduced reverse transfer capacitance
(by 70%, @ $V_{DS}=30V$)



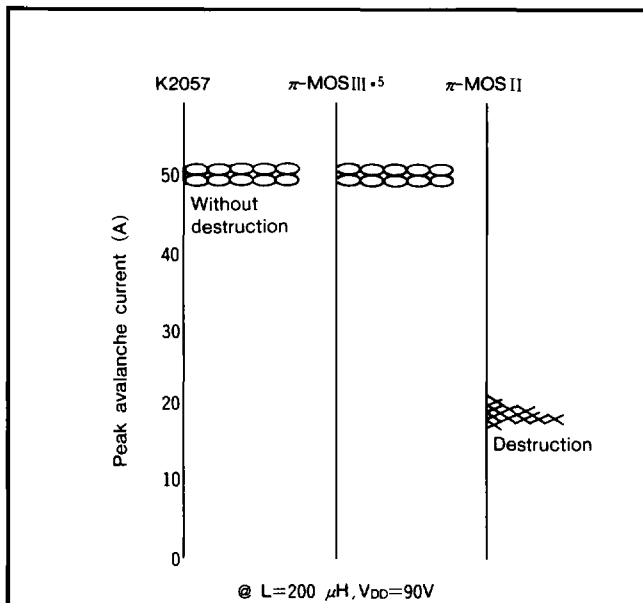
(2) Built-in zener diode for protection between the gate and source



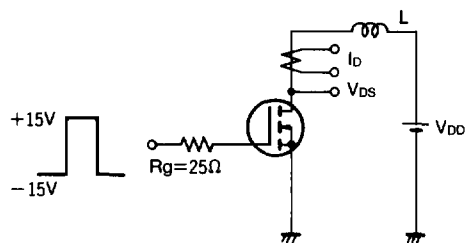
(3) Small total gate charge (10% down) (4) High speed



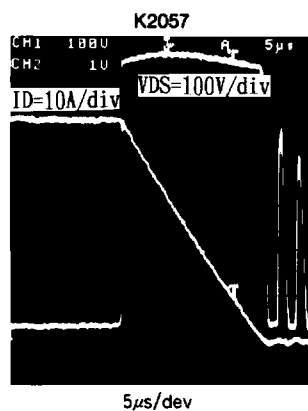
(5) Improved avalanche



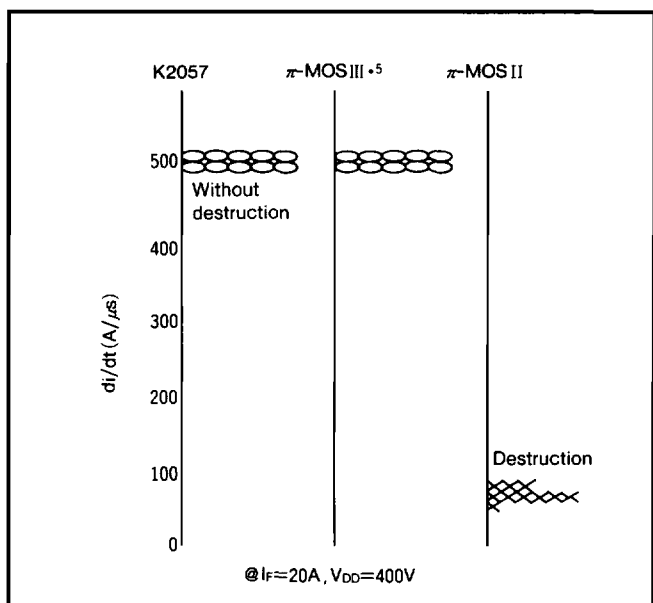
Test circuit



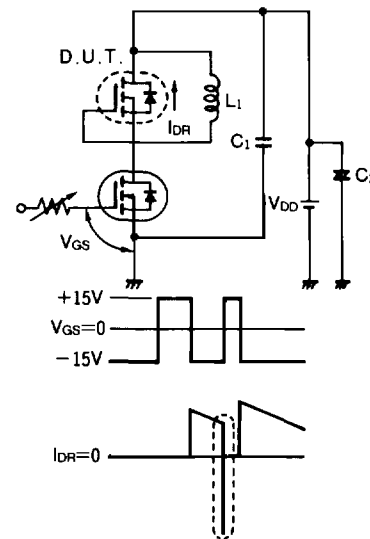
Waveform



(6) Built-in high strength diode



Test circuit



Waveform

