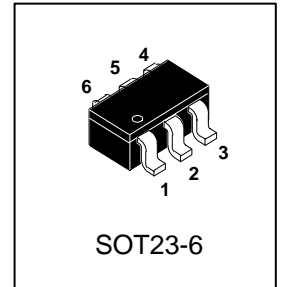


# P3475

## 30V P-Channel Enhancement-Mode MOSFET

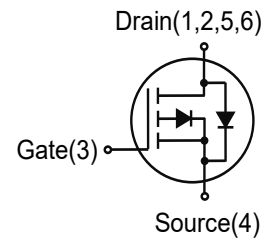
### 1. FEATURES

- VDS = -30V
- RDS(ON) ≤ 65mΩ@VGS = -10V
- RDS(ON) ≤ 90mΩ@VGS=-4.5V
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



### 2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
P3475	A75	3000/Tape&Reel



### 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-Source Voltage		VDSS	-30	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current	Ta=25°C	ID	-4.5	A
	Ta=70°C		-3.5	
Pulsed Drain Current (Note 2)		IDM	-18	
Avalanche Current		IAS	11	A
Avalanche energy(L=0.1mH)		EAS	6.05	mJ
Power Dissipation (Note 1)	Ta=25°C	PD	1.4	W
	Ta=70°C		0.9	
Junction and Storage Temperature Range		Tj,Tstg	-55~+150	°C

### 4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Thermal Resistance,Junction-to-Ambient (Note 1)	RθJA	89	°C/W
Thermal Resistance,Junction-to-Case	RθJC	30	°C/W

- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu
- 2.Pulse width limited by maximum junction temperature

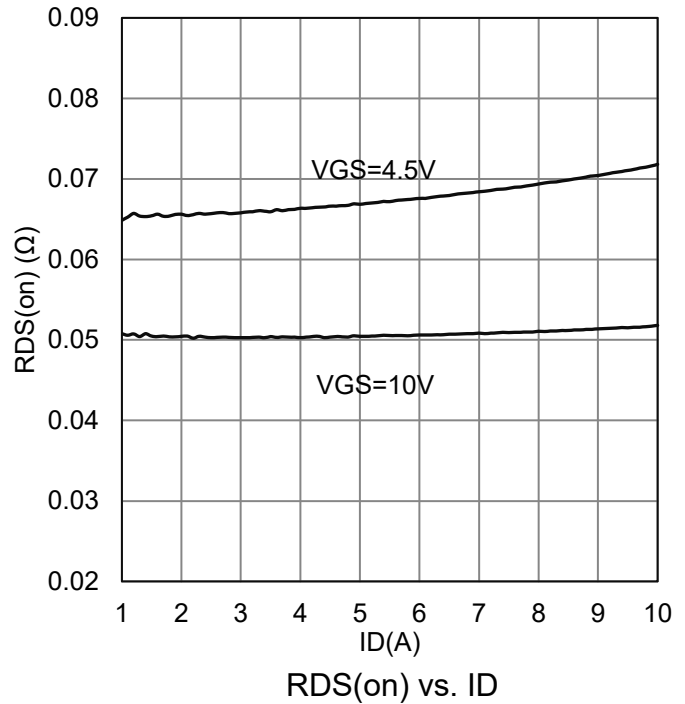
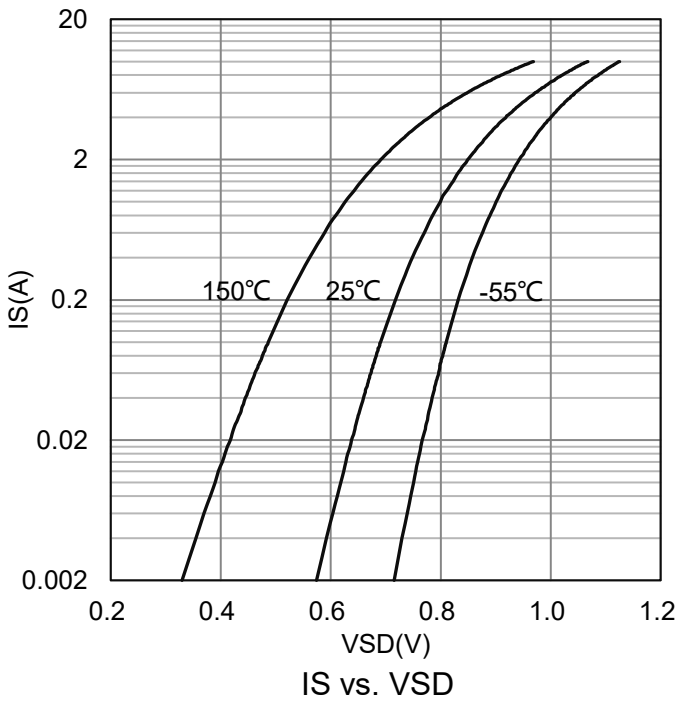
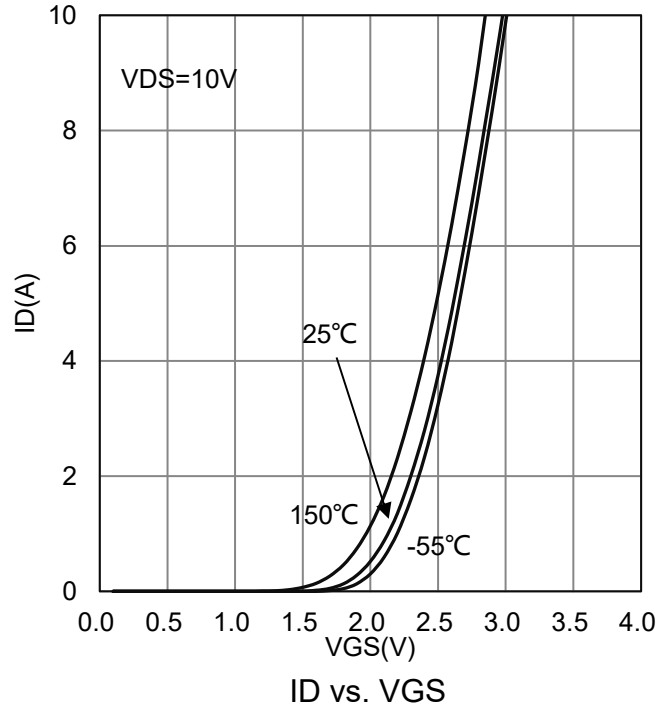
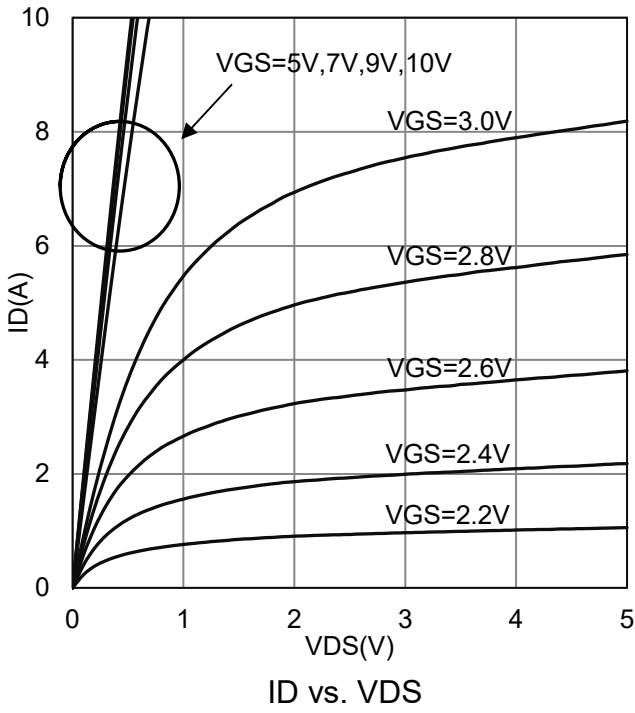


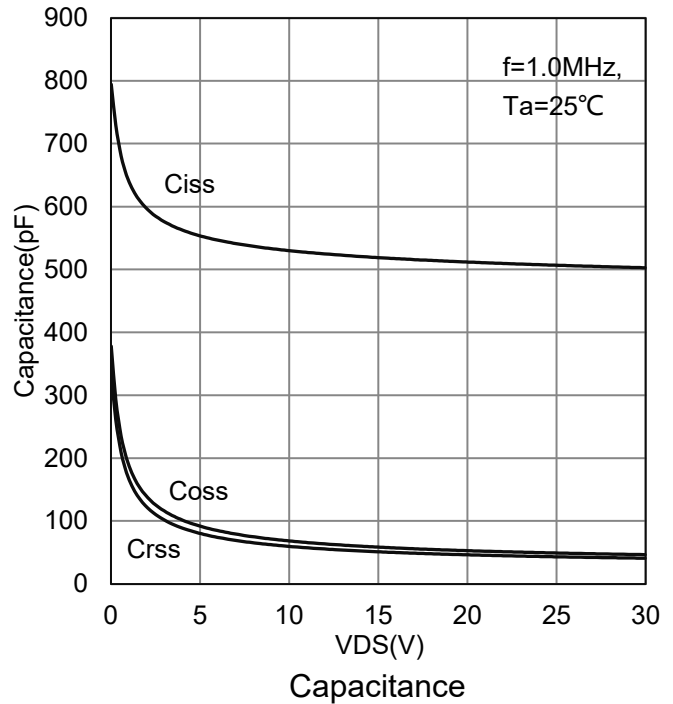
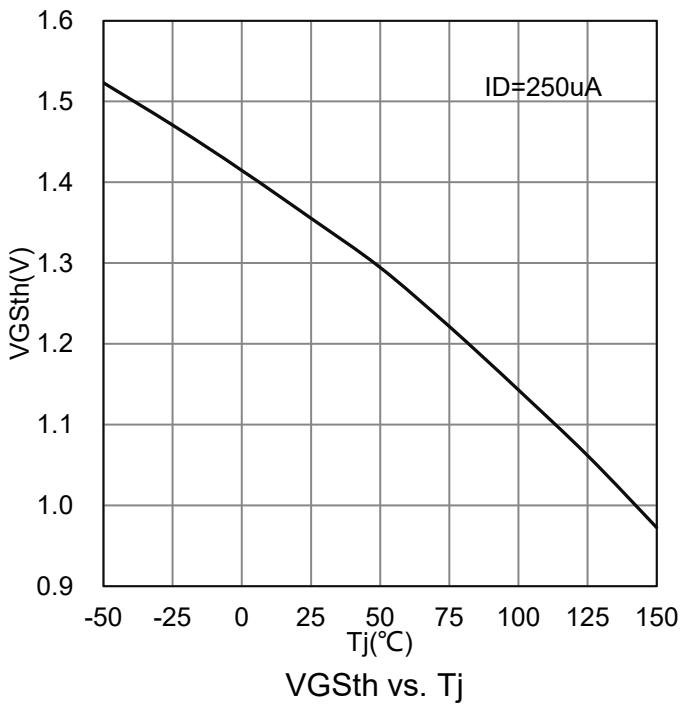
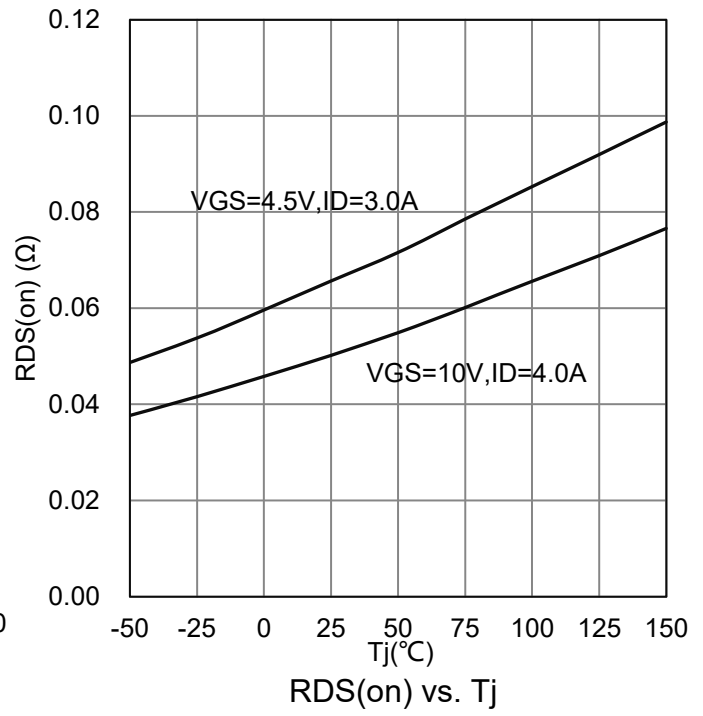
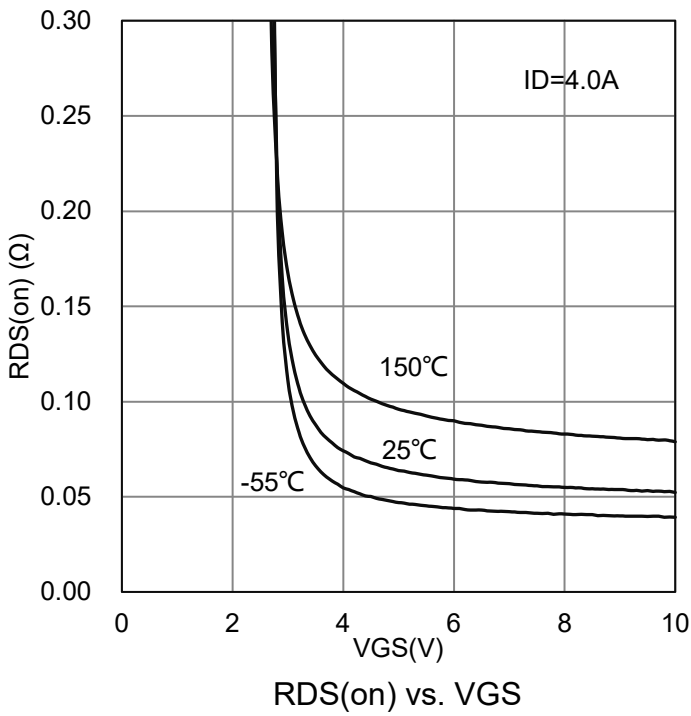
**5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

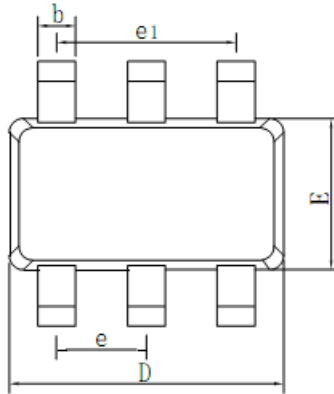
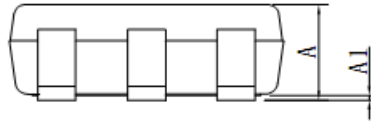
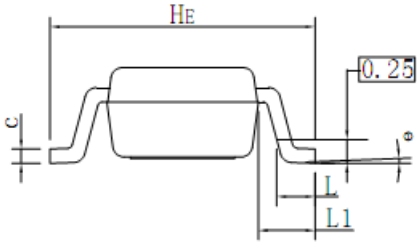
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain-Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-30	-	-	V	
Zero Gate Voltage Drain Current (VGS = 0, VDS = -24 V)	IDSS	-	-	-1	μA	
Gate Leakage Current (VDS =0V, VGS =±20V)	IGSS	-	-	±100	nA	
Gate Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-1	-1.4	-1.6	V	
Static Drain-Source On-State Resistance (VGS =-10V, ID =-4A) (VGS =-4.5V, ID =-3A)	RDS(on)	- -	- -	65 90	mΩ	
Dynamic						
Input Capacitance (VGS = 0 V, f = 1.0MHz, VDS= -15 V)	Ciss	-	534	-	pF	
Output Capacitance (VGS = 0 V, f = 1.0MHz, VDS= -15 V)	Coss	-	60	-		
Reverse Transfer Capacitance (VGS = 0 V, f = 1.0MHz, VDS= -15 V)	Crss	-	52	-		
Gate resistance (VGS =0V, VDS =0V, f=1MHz)	Rg	-	12	-	Ω	
Total Gate Charge	(VDS =-15V, ID =-4A)	Qg(10V)	-	11.4	-	nC
Total Gate Charge		Qg(4.5V)	-	5.6	-	
Gate-Source Charge		Qgs	-	1.3	-	
Gate-Drain Charge		Qgd	-	2.3	-	
Turn-On Delay Time	(VDS = -15V, RL= 3.6 Ω, VGS = -10V, RG = 3Ω)	td(on)	-	3.6	-	ns
Rise Time		tr	-	9.8	-	
Turn-Off Delay Time		td(off)	-	19.2	-	
Fall Time		tf	-	6.7	-	
Forward Voltage (VGS = 0 V, IS = -1A)	VSD	-	-	-1.5	V	



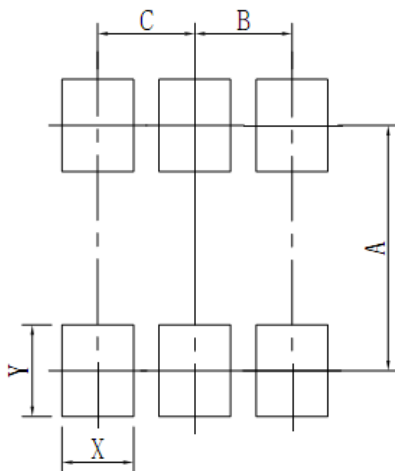
**6. ELECTRICAL CHARACTERISTICS CURVES**



**6. ELECTRICAL CHARACTERISTICS CURVES(Con.)**


**7.OUTLINE AND DIMENSIONS**
**SOT23-6**


SOT23-6			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.25	0.40	0.50
c	0.10	0.17	0.26
D	2.80	2.90	3.10
E	1.30	1.60	1.70
e	0.85	0.95	1.05
e1	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.60REF		
HE	2.50	2.80	3.00
θ	0°	-	10°

**8.SOLDERING FOOTPRINT**


SOT23-6	
DIM	(mm)
X	0.70
Y	0.90
A	2.40
B	0.95
C	0.95

