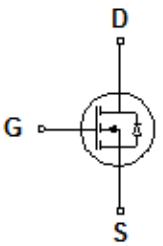
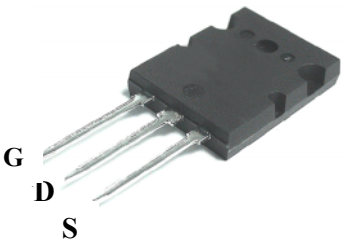
PRELIMINARY DATASHEET

900V 2X36A N-Channel CooLMOS™ Parallel In TO264 Package

- Extreme dv/dt rated
- High peak current capability
- Ultra low gate charge
- Designed for
  - Industrial SMPS
  - Consumer applications
  - Quasi resonant flyback / forward topologies
- Pb-free lead finish; RoHS compliant





MAXIMUM RATINGS, T_C = 25°C unless otherwise noted

Parameter	Symbol	Value	Units
Drain - Source Voltage	V_{DSS}	900	V
Drain current – continuous T_C= 25°C T_C= 100°C	I_D	 72 46	A
Drain current – pulsed[1]	$I_{D,pulse}$	192	
Continuous diode forward current	I_S	52	
Diode pulse current[1]	I_S,pulse	162	
Avalanche current[1,2]	I_{AR}	8.8	
Single-pulsed avalanche energy I_D = 8.8A, V_{DD} = 50V	E_{AS}	1940	mJ
Repetitive avalanche energy[1,2] I_D = 8.8A, V_{DD} = 50V	E_{AR}	2.9	
Peak diode recovery	dv/dt	50	V/ns
Gate source voltage Static AC (f > 1Hz)	V_{GS}	 ±20 ±30	
Operating junction and storage temperature	T_j, T_{stg}	-55… +150	°C

Thermal Resistance

Parameter	Symbol	Max. Value	Units
Characteristics			
Thermal resistance, junction to case	R_{thJC}	0.15	K/W
Thermal resistance, junction to ambient	R_{thJA}	62	

© 2008 **iQXPRZ Power Inc.** All rights reserved
Team Pacific Building, Electronics Avenue
FTI Complex, Special Economic Zone
Taguig City, Philippines

iQXPRZ Power Inc. reserves the right to change without notice the specifications and information contained within.

Website: www.iqxprzpower.com
Telefax +632 837 1538

ELECTRICAL CHARACTERISTICS, at T_j = 25°C, unless otherwise specified

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Static Characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS} = 0V, I_D = 500µA,	900	-	-	V
Gate threshold voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 5.8mA	2.5	3.0	3.5	
Zero gate voltage drain current	I_{DSS}	V_{GS} = 0V, V_{DS} = 900V T_C = 25°C T_C = 125°C	- -	- 100	20 -	µA
Gate-body leakage current, forward	I_{GSS}	V_{GS} = 20V, V_{DS} = 0V	-	-	200	nA
Static drain-source On-resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 52A T_C = 25°C T_C = 125°C	- -	0.05 0.135	0.06 -	Ω
Gate resistance	R_G	f = 1MHz, open drain	-	0.9	-	
Dynamic Characteristics						
Input capacitance	C_{iss}	V_{DS} = 25V, V_{GS} = 0V, f = 1MHz	-	13600		pF
Output capacitance	C_{oss}		-	660		

SWITCHING CHARACTERISTICS

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Turn-on delay time	$t_{d(on)}$	V_{DS}=400V, V_{GS} = 10V I_D=52A, R_G=3.65Ω	-	70	-	ns
Rise time	t_r		-	20	-	
Turn-off delay time	$t_{d(off)}$		-	400	-	
Fall time	t_f		-	25	-	
Gate charge	Q_g	V_{DS} = 400V, I_D = 52A V_{GS} = 0V to 10V	-	540	-	nC
Gate-source charge	Q_{gs}		-	64	-	
Gate-drain charge	Q_{gd}		-	230	-	

Drain-Source Diode Characteristics and Maximum Ratings

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Drain-source diode forward voltage	V_{SD}	V_{GS} = 0V, I_F = 52A	-	0.8	1.2	V
Reverse recovery time	t_{rr}	V_R =400V, I_S = I_F=26A, dI_F/dt = 100A/µs	-	920	-	ns
Reverse recovery charge	Q_{rr}		-	30	-	µC
Peak reverse recovery current	I_{rrm}		-	65	-	A

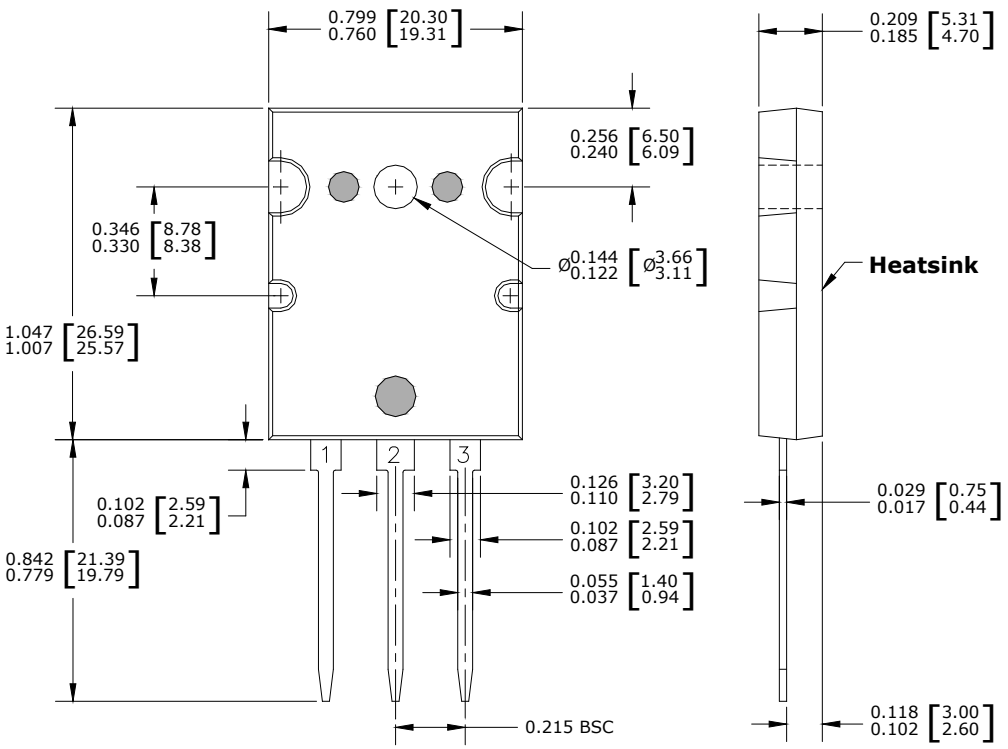
Notes:
1. *Pulse width t_P limited by T_{Jmax}*
2. *Repetitive avalanche causes additional power losses than can be calculated as P_{AV} = E_{AR}*f.*

© 2008 **iQXPRZ Power Inc.** All rights reserved
Team Pacific Building, Electronics Avenue
FTI Complex, Special Economic Zone
Taguig City, Philippines

iQXPRZ Power Inc. reserves the right to change without notice the specifications and information contained within.

Website: www.iqxprzpower.com
Telefax +632 837 1538

Package Outline Drawing



CoolMOS™ is a reaistered trademark of Infineon Technoloaies

CAUTION: These devices are ESD sensitive. Use proper handling procedure.

Disclaimer

These specifications may not be considered as a guarantee of components characteristics. Components have to be tested depending on intended application as adjustments may be necessary. The use of **iQXPRZ Power Inc.** components in life support appliances and systems are subject to written approval of **iQXPRZ Power Inc.**

© 2008 **iQXPRZ Power Inc.** All rights reserved
Team Pacific Building, Electronics Avenue
FTI Complex, Special Economic Zone
Taguig City, Philippines

iQXPRZ Power Inc. reserves the right to change without notice the specifications and information contained within.

Website: www.iqxprzpower.com
Telefax +632 837 1538