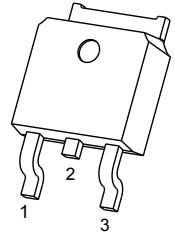


**TO-252-2L(4R) Plastic-Encapsulate MOSFETS****CJU60N08 N-Channel Power MOSFET**

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
80V	8.5mΩ@10V	60A

GENERAL DESCRIPTION

The CJU60N08 uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge. It can be used in a wide variety of applications.

TO-252-2L(4R)

1. GATE
2. DRAIN
3. SOURCE

FEATURE

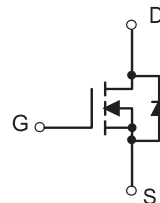
- $V_{DS} = 80V, I_D = 60A$
- $R_{DS(ON)} < 8.5m\Omega @ V_{GS} = 10V$
- Good stability and uniformity with high EAS
- Excellent package for good heat dissipation
- High density cell design for ultra low $R_{DS(on)}$
- Special process technology for high ESD capability
- Fully characterized avalanche voltage and current

APPLICATION

- Power switching application
- Hard switched and high frequency circuits
- Uninterruptible power supply

MARKING

CJU60N08= Device code
Solid dot = Green molding compound device,
if none, the normal device
XXX=Code

EQUIV ALENT CIRCUIT**Maximum ratings ($T_a = 25^\circ C$ unless otherwise noted)**

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	80	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	60	A
Pulsed Drain Current	I_{DM}	240	
Single Pulsed Avalanche Energy (note1)	E_{AS}	300	mJ
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	100	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{STG}	-55 ~ +150	
Maximum lead temperature for soldering purposes , 1/8" from case for 5 seconds	T_L	260	

MOSFET ELECTRICAL CHARACTERISTICS

$T_a = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	80			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 80V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 20V$			± 100	nA
On characteristics (note2)						
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	2	3	4	V
Static drain-source on-state resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 30A$		7.0	8.5	m Ω

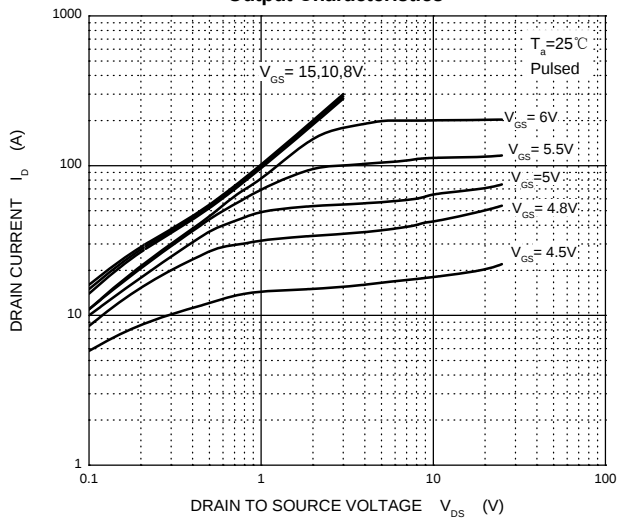
Dynamic characteristics (note 3)						
Input capacitance	C _{iss}	V _{DS} =25V,V _{GS} =0V, f =1MHz		4400		pF
Output capacitance	C _{oss}			340		
Reverse transfer capacitance	C _{rss}			260		
Switching characteristics (note 3)						
Total gate charge	Q _g	V _{DS} =30V, V _{GS} =10V, I _D =30A		100		nC
Gate-source charge	Q _{gs}			20		
Gate-drain charge	Q _{gd}			30		
Turn-on delay time	t _{d(on)}	V _{DD} =30V,V _{GS} =10V, R _G =2.5Ω, I _D =2A, R _L =15Ω		18		ns
Turn-on rise time	t _r			12		
Turn-off delay time	t _{d(off)}			56		
Turn-off fall time	t _f			15		
Drain-Source Diode Characteristics						
Drain-source diode forward voltage(note2)	V _{SD}	V _{GS} =0V, I _S =30A			1.2	V
Continuous drain-source diode forward current	I _S				60	A
Pulsed drain-source diode forward current	I _{SM}				240	A

Notes:

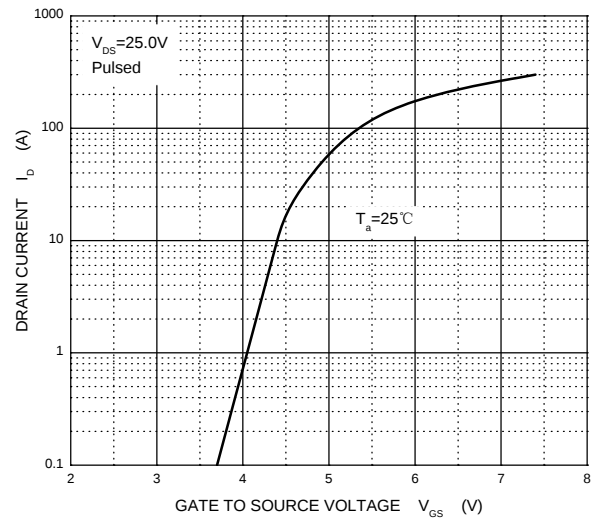
1. $L = 0.5mH, V_{DD} = 40V, V_G = 10V, R_G = 25\Omega$, Starting $T_J = 25^\circ\text{C}$.
2. Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.
3. Guaranteed by design, not subject to production.

Typical Characteristics

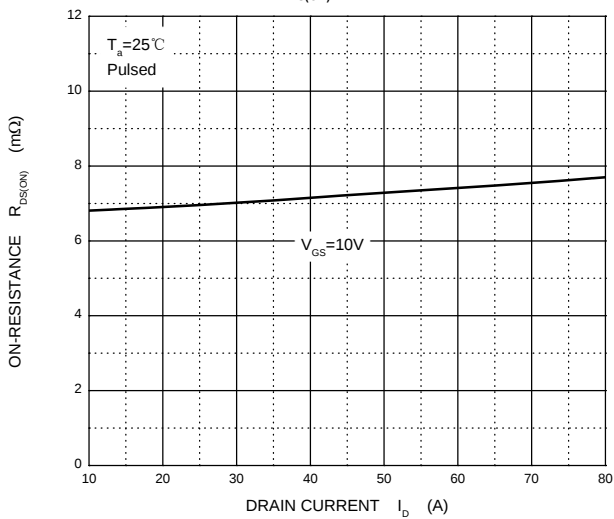
Output Characteristics



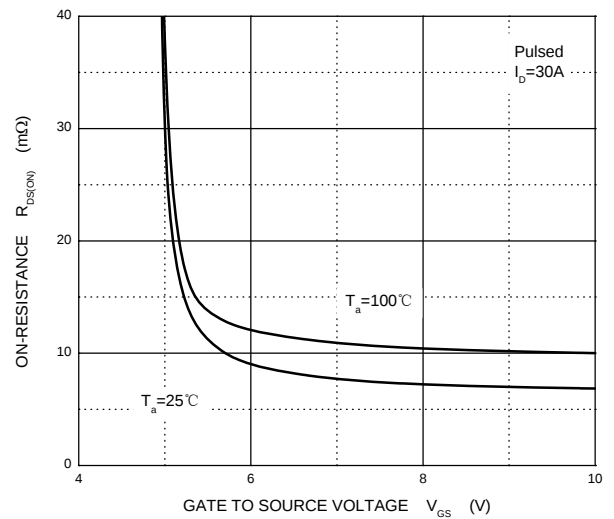
Transfer Characteristics



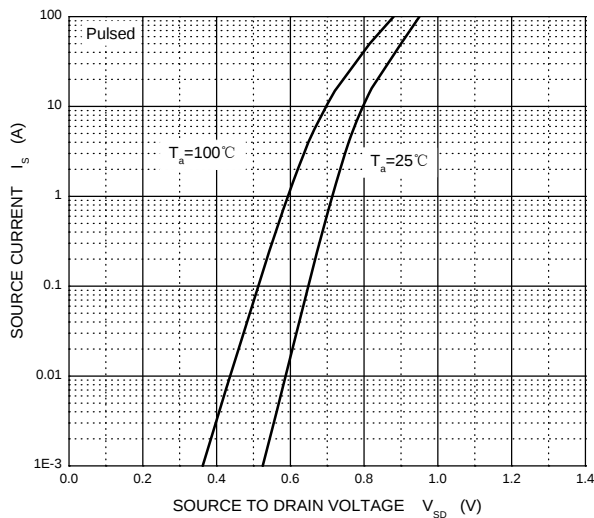
$R_{DS(ON)}$ — I_D



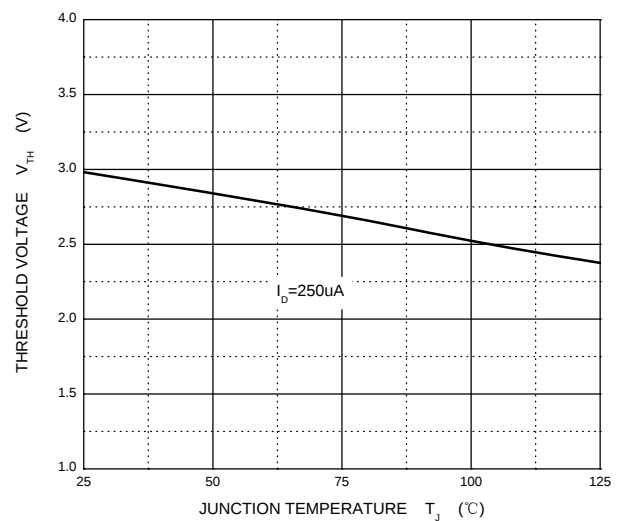
$R_{DS(ON)}$ — V_{GS}



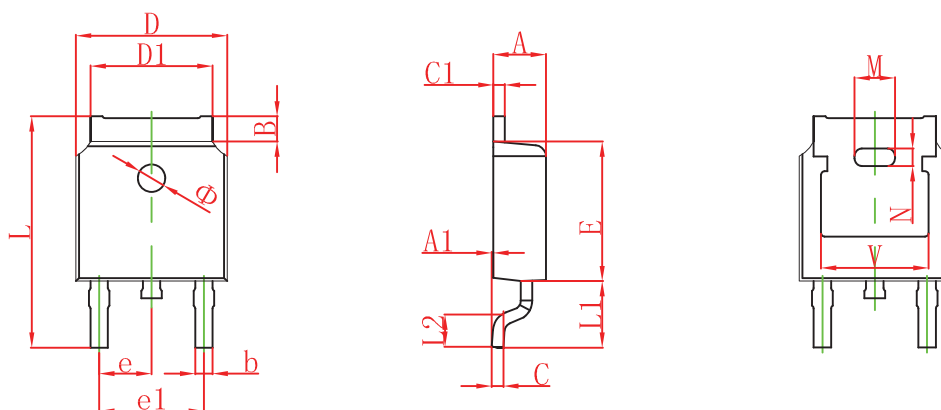
I_S — V_{SD}



Threshold Voltage

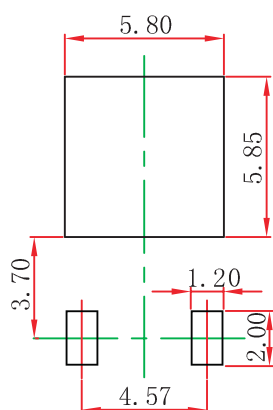


TO-252(4R)-2L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.380	0.087	0.094
A1	0.000	0.100	0.000	0.004
B	0.800	1.400	0.031	0.055
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
c1	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
E	6.000	6.200	0.236	0.244
e	2.286 TYP.		0.090 TYP.	
e1	4.327	4.727	0.170	0.186
M	1.778REF.		0.070REF.	
N	0.762REF.		0.018REF.	
L	9.800	10.400	0.386	0.409
L1	2.9REF.		0.114REF.	
L2	1.400	1.700	0.055	0.067
V	4.830 REF.		0.190 REF.	
Φ	1.100	1.300	0.043	0.051

TO-252(4R)-2L Suggested Pad Layout



Note:

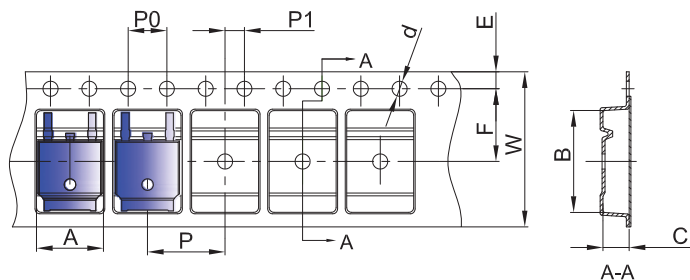
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

TO-252(4R)-2L Tape and Reel

TO-252 Embossed Carrier Tape

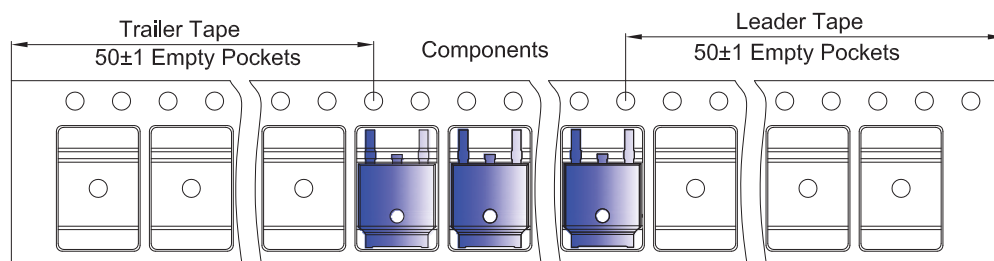


Packaging Description:

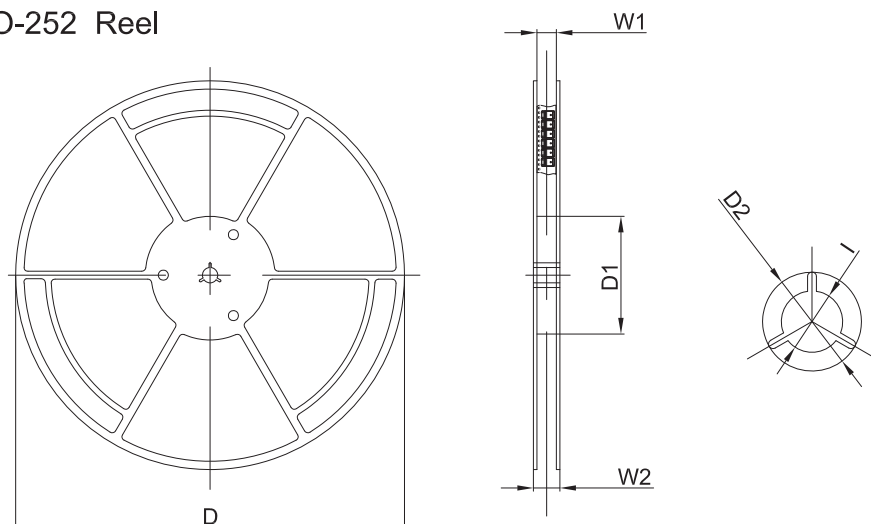
TO-252 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 25,00 units per 13" or 33.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-252	6.90	10.50	2.70	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00

TO-252 Tape Leader and Trailer



TO-252 Reel



Dimensions are in millimeter						
Reel Option	D	D1	D2	W1	W2	I
13"Dia	330.00	100.00	Ø21.00	16.40	21.00	Ø13.00

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
2,500 pcs	13inch	2,500 pcs	340×336×29	25,000 pcs	353×346×365	