

N-Channel Enhancement Mode Field Effect Transistor

Product Summary

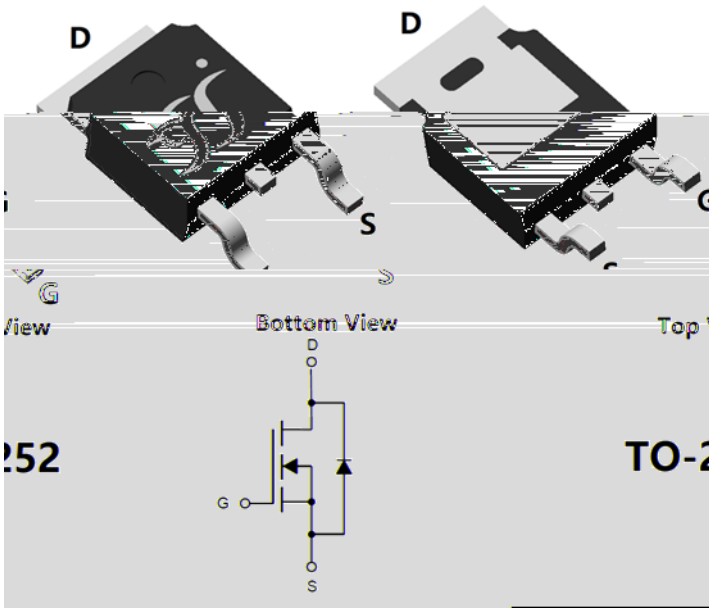
V_{DS}	100V
I_D	45A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	17 mohm
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	21.5 mohm
100% EAS Tested	
100% V_{DS} Tested	

General Description

- Low $R_{DS(on)}$ & FOM
- Extremely low switching loss
- Excellent stability and uniformity
- Fast switching and soft recovery
- 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free

Applications

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



Absolute Maximum Ratings ($T_A=25$ unless otherwise noted)

Parameter	Symbol	Limit	Unit	
Drain-source Voltage	V_{DS}	100	V	
Gate-source Voltage	V_{GS}	20	V	
Drain Current	I_D	$T_C=25$	45	A
		$T_C=100$	28.5	
Pulsed Drain Current ^A	I_{DM}	180	A	
Avalanche energy ^B	EAS	81	mJ	
Total Power Dissipation ^C	P_D	$T_C=25$	72	W
		$T_C=100$	28.8	
Junction and Storage Temperature Range	T_J, T_{STG}	-55 +150		

Thermal resistance

Parameter	Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient ^D	R	15	20	/W
Thermal Resistance Junction-to-Ambient ^D		Steady-State	40	
Thermal Resistance Junction-to-Case	R	1.35	1.7	

Ordering Information (Example)

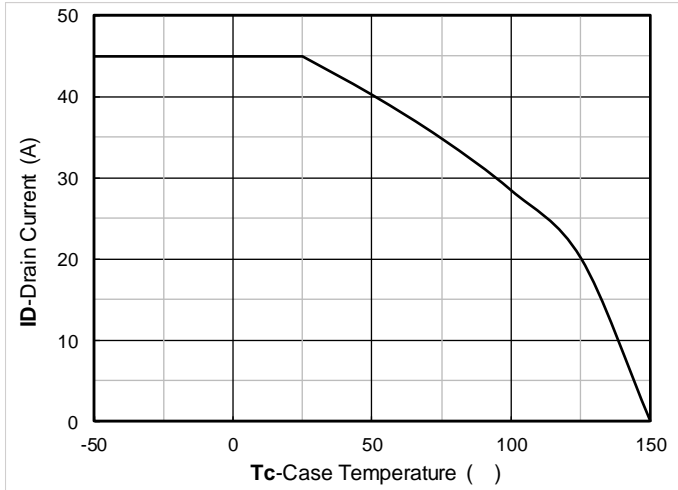
PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJD45G10A	F1/F2	YJD45G10A	2500	/	25000	



YJD45G10A

Electrical Characteristics ($T_j=25$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100, V_{GS}=0V$			1	
Gate-Body Leakage Current	I					





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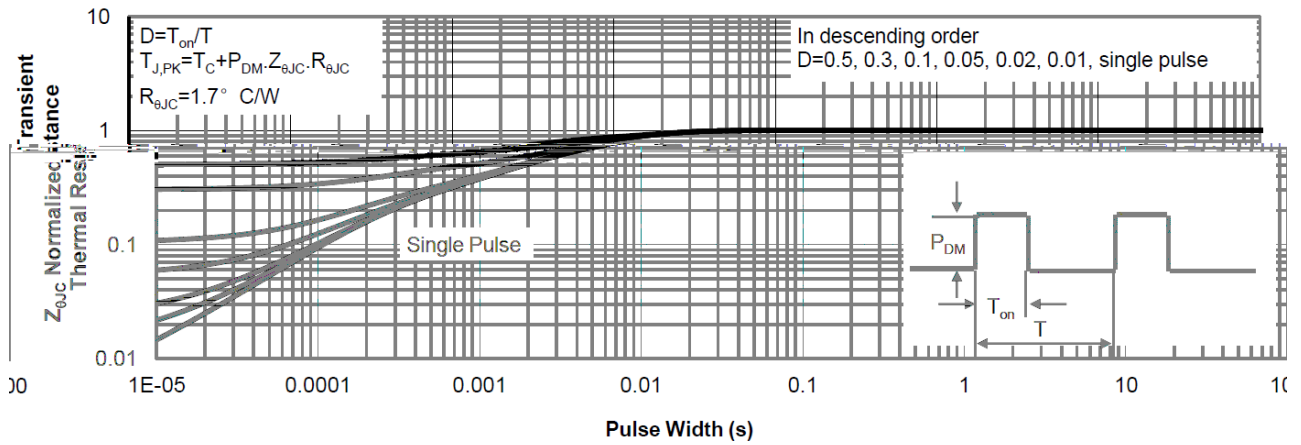
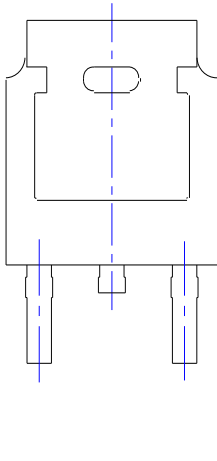
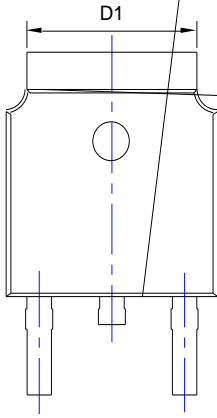


Figure13.Normalized Maximum Transient thermal impedance



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TO-252-B Package information



SYMBOL	DIMENSIONS				
	MIN.	NOM.			
A1	0.000				
A2	0.087	0.091			
A3	0.035	0.039			
b	0.026	0.030			
c	0.018	0.020			
D	0.256	0.260			
D1					
D2	0.181	0.189			
E	0.390	0.398			
E1	0.236	0.240			

NOTE:

- 1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
- 2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
- 3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



YJD45G10A

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