

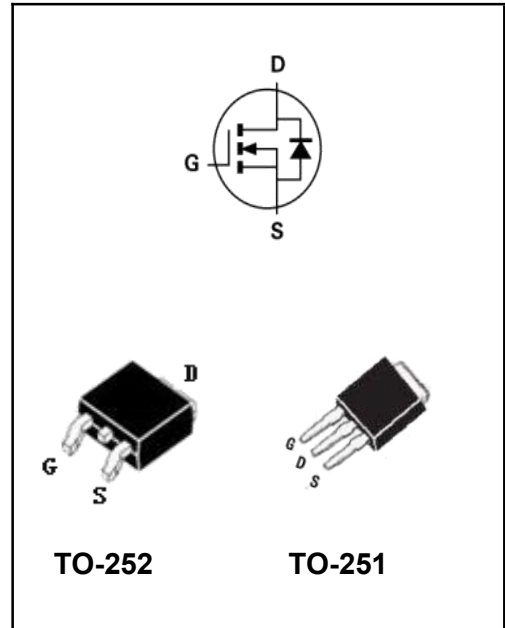
40V N-Channel Enhancement Mode MOSFET

MAIN CHARACTERISTICS

I_D	80A
V_{DSS}	40V
R_{DS(ON)-typ(@V_{GS}=10V)}	<7mΩ (Type:5.5mΩ)

FEATURES

Adopt advanced trench technology to provide excellent RDS(ON), low gate charge and operation with gate voltages as low as 4.5V. This device is suitable for use as aBattery protection or in other Switching application.



APPLICATIONS

- Battery protection
- Load switch
- Uninterruptible power supply

MECHANICAL DATA

- Case: Molded plastic
- Mounting Position: Any
- Molded Plastic: UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275°C maximum,10s per JESD 22-B106

Product Specification Classification

Part Number	Package	Marking	Pack
YFW80N04AD	TO-252	YFW 80N04AD XXXXX	2500PCS/Tape
YFW80N04AMJ	TO-251	YFW 80N04AMJ XXXXX	4000PCS/box

Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	± 20	V
Continue Drain Current	I_D	80	A
Pulsed Drain Current (Note1)	I_{DM}	350	A
Power Dissipation	P_D	80	W
Single Pulse Avalanche Energy (Note1)	E_{AS}	750	mJ
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.88	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62	°C/W

Note1:Pulse test: 300 μ s pulse width, 2 % duty cycle

Electrical Characteristics at Tc=25°C unless otherwise specified

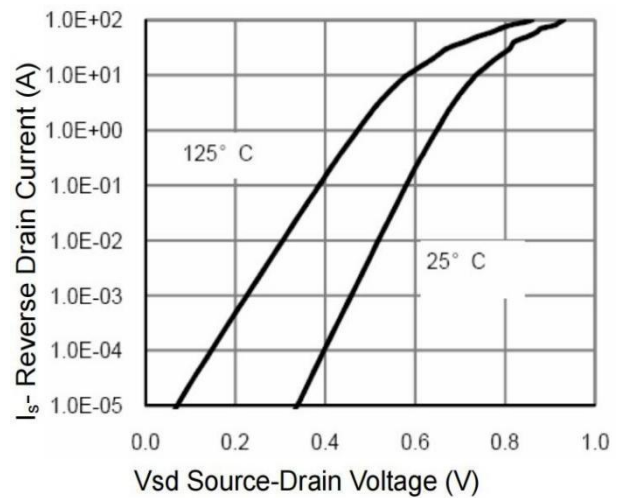
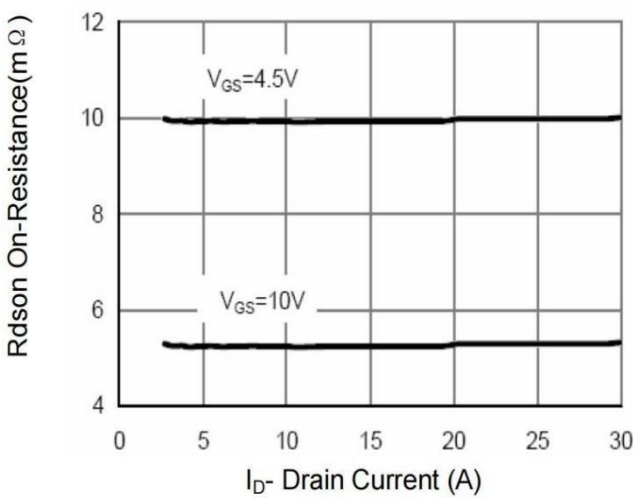
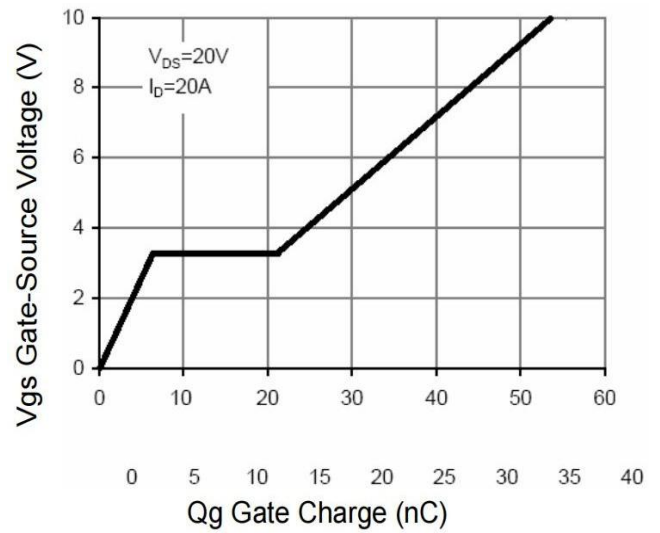
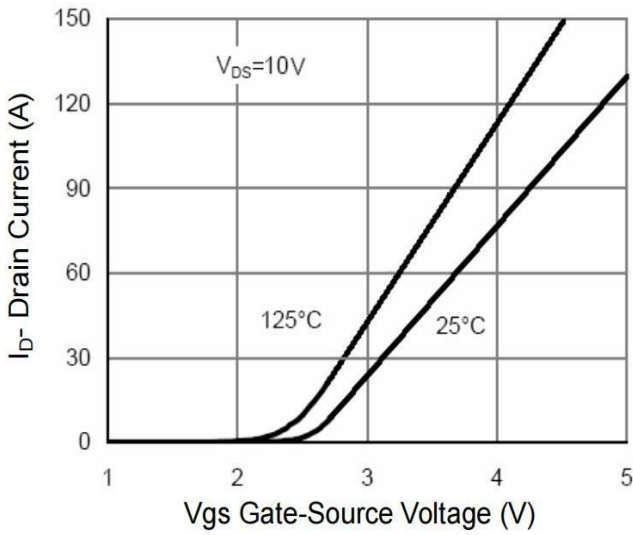
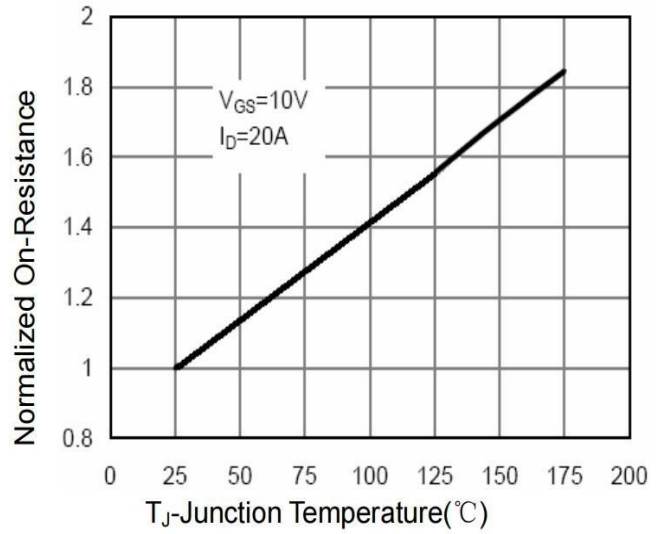
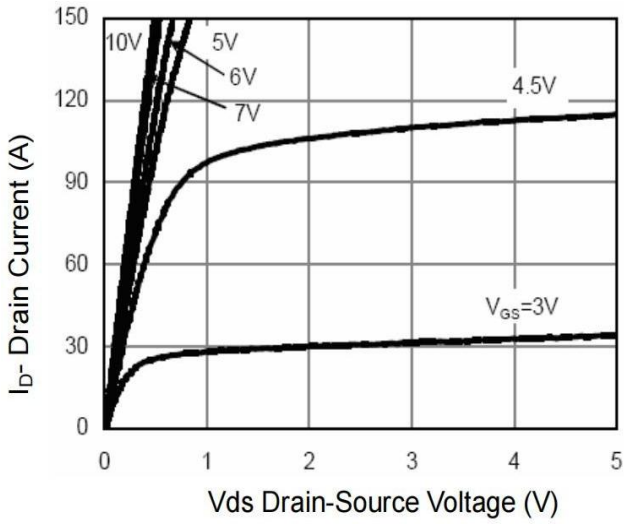
Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS} = 0 V, I_D = 250 \mu A$	BV_{DSS}	40	-	-	V
Drain-Source Leakage Current	$V_{DS} = 40 V, V_{GS} = 0 V$	I_{DSS}	-	-	1	μA
Gate Leakage Current	$V_{GS} = \pm 20 V, V_{DS} = 0 V$	I_{GSS}	-	-	± 100	nA
Gate-Source Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250 \mu A$	$V_{GS(th)}$	1.1	-	2.4	V
Drain-Source On-State Resistance	$V_{GS} = 10 V, I_D = 30 A$	$R_{DS(on)}$	-	5.5	7	m Ω
	$V_{GS} = 4.5 V, I_D = 20 A$	$R_{DS(on)}$	-	8	12	m Ω
Forward Transconductance	$V_{DS} = 10 V, I_D = 20 A$	g_{fs}	15	-	-	S
Input Capacitance	$V_{DS}=20V, V_{GS}=0V, f=1MHz$	C_{iss}	-	2662	3200	pF
Output Capacitance		C_{oss}	-	322	-	pF
Reverse Transfer Capacitance		C_{rss}	-	246	-	pF
Turn-on Delay Time(Note2)	$V_{DD}=20V, V_{GS}=10V, RG=3 \Omega, RL=1 \Omega$	$t_{d(ON)}$	-	12	-	ns
Rise Time(Note2)		t_r	-	11	-	ns
Turn-Off Delay Time(Note2)		$t_{d(OFF)}$	-	39	-	ns
Fall Time(Note2)		t_f	-	12	-	ns
Total Gate Charge(Note2)	$V_{DS}=20V, V_{GS}=10V, I_D=20A$	Q_G	-	54.3	-	nC
Gate to Source Charge(Note2)		Q_{GS}	-	6.9	-	nC
Gate to Drain Charge(Note2)		Q_{GD}	-	14.5	-	nC

Source-Drain Diode Characteristics at Ta=25°C unless otherwise specified

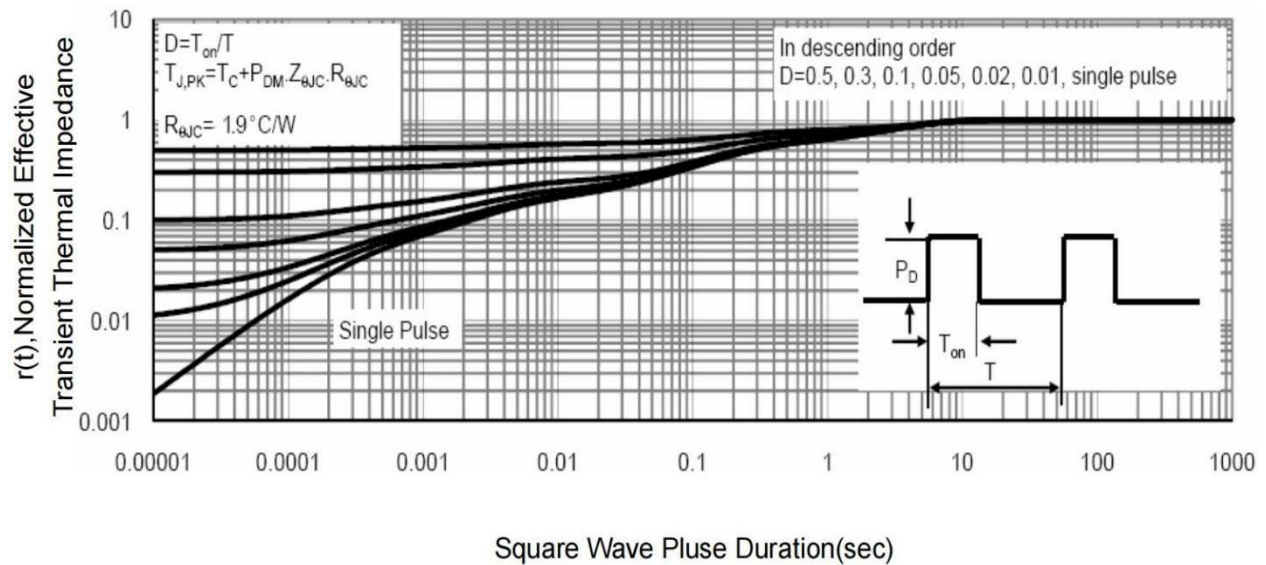
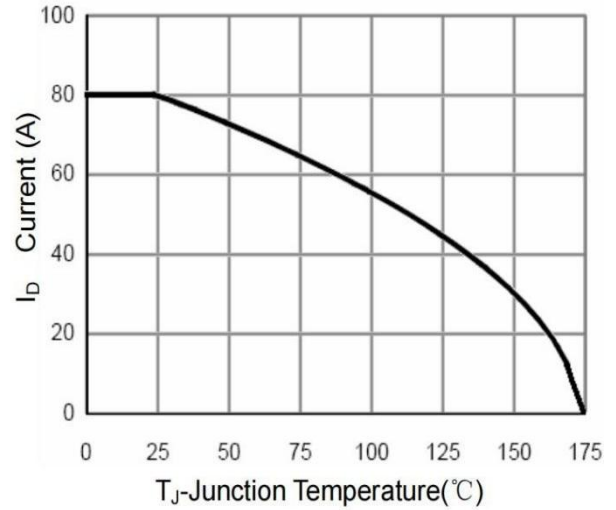
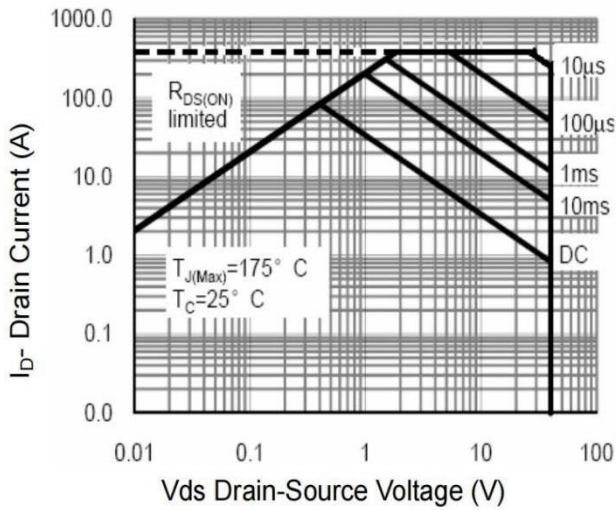
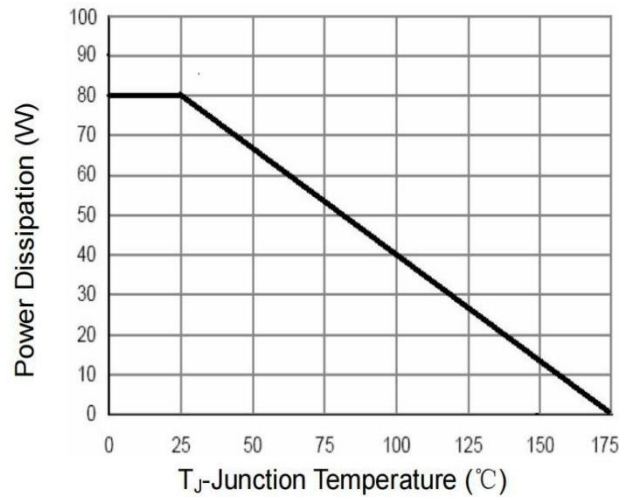
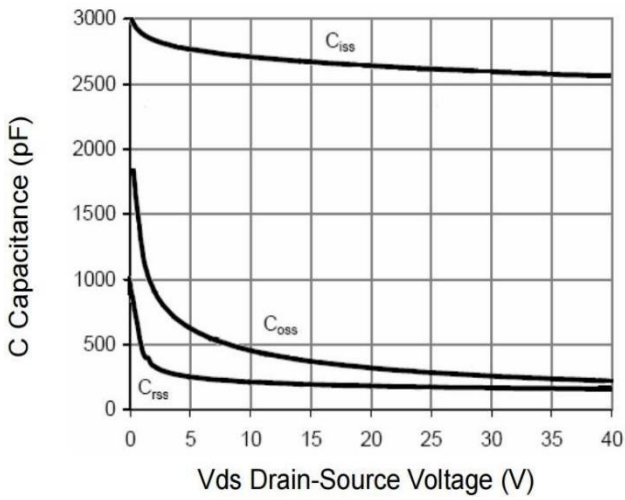
Characteristics	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Maximun Body-Diode Continuous Current		I_S	-	-	80	A
Drain-Source Diode Forward Voltage	$V_{GS}=0V, I_S=10A, T_J=25$	V_{SD}	-	-	1.2	V
Reverse Recovery Time(Note2)	$T_J = 25^\circ C, I_F = 20A$ $di / dt = 100 A/\mu s$	t_{rr}	-	-	45	ns
Reverse Recovery Charge(Note2)		Q_{rr}	-	-	50	nC

Note2:Pulse test: 300 μ s pulse width, 2 % duty cycle

RATINGS AND CHARACTERISTIC CURVES

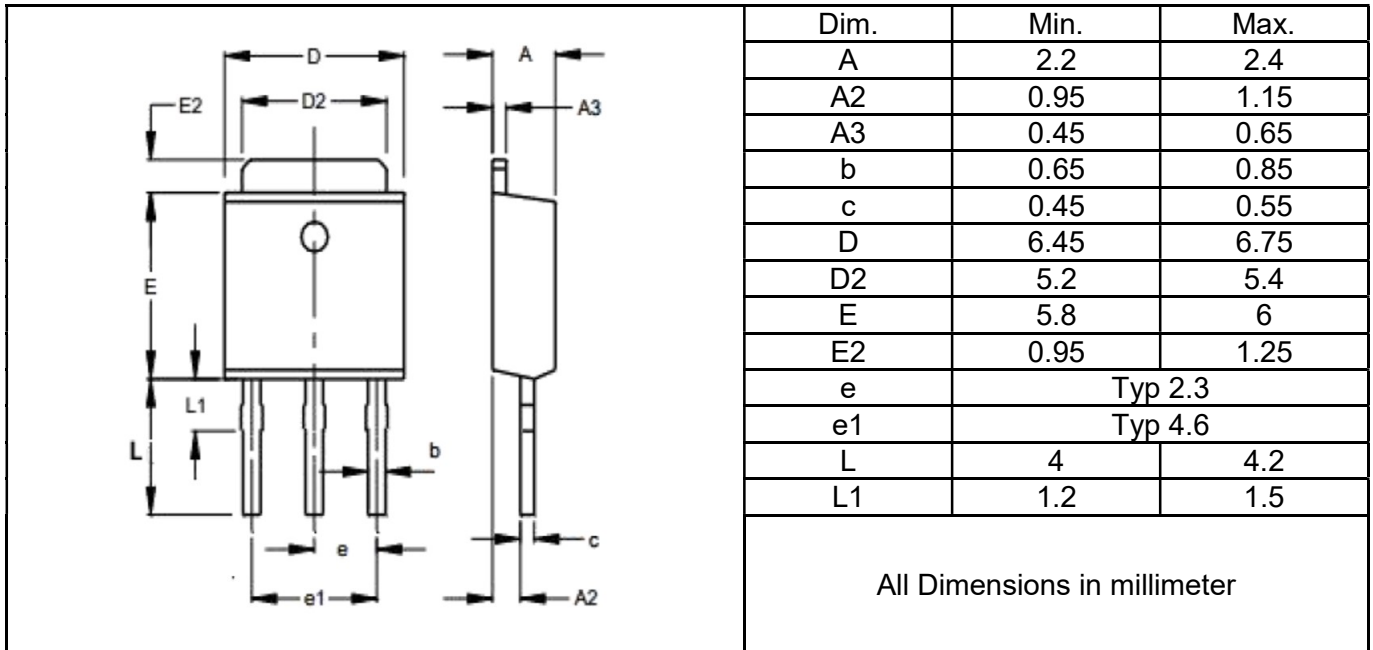


RATINGS AND CHARACTERISTIC CURVES

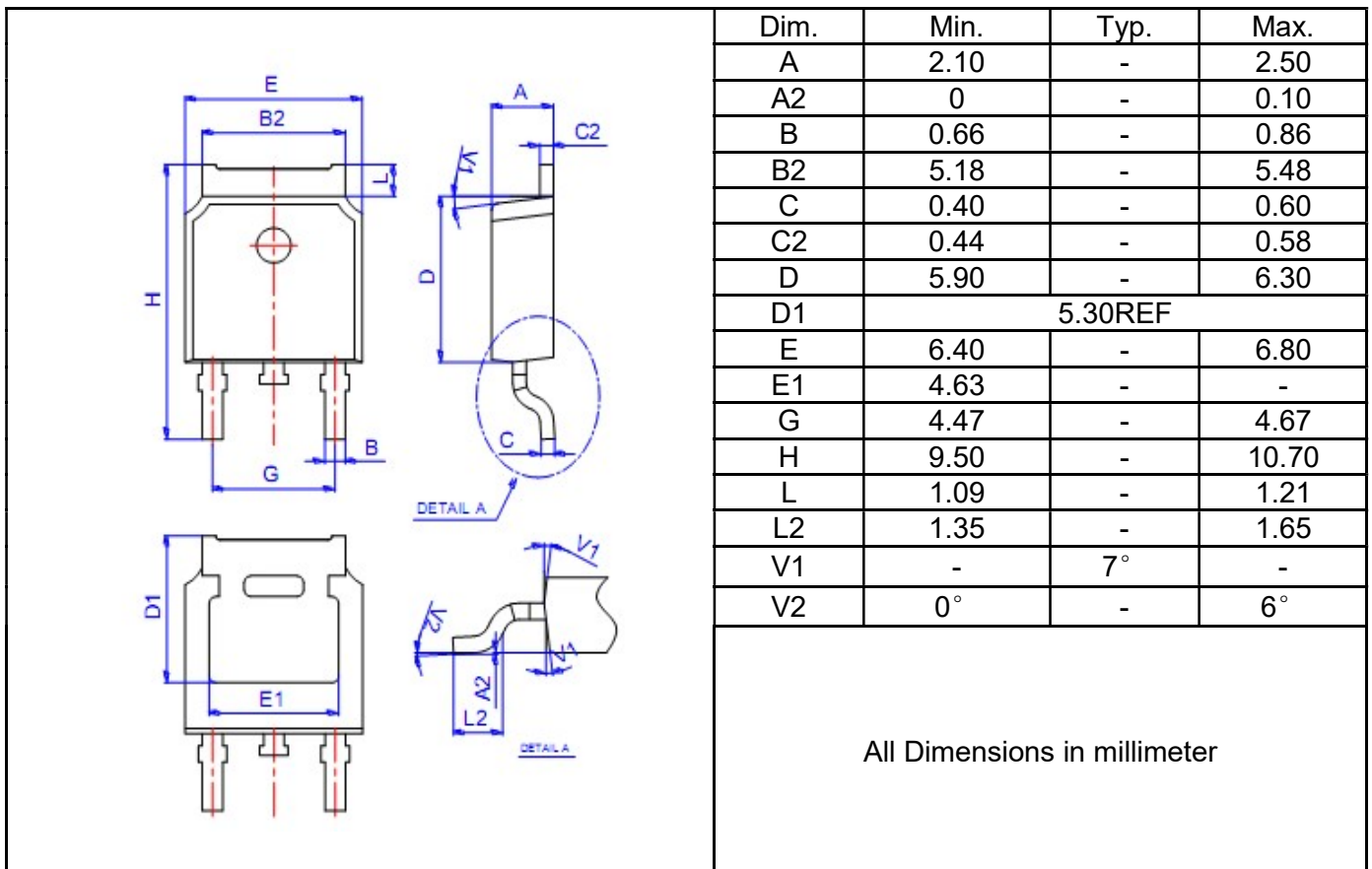


Package Outline Dimensions millimeters

TO-251



TO-252



单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)