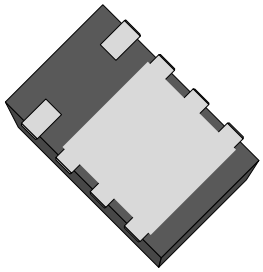
WPT2N41

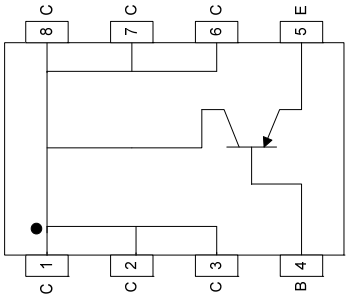
Single, PNP, -30V, -3A, Power Transistor **Http//:www.willsemi.com**

Descriptions

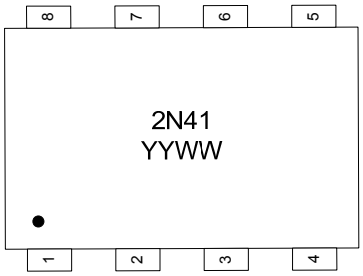
The WPT2N41 is PNP bipolar power transistor with very low saturation voltage. This device is suitable for use in charging circuit and other power management. Standard Product WPT2N41 is Pb-free.



PDFN3x2-8L



Pin configuration (Top view)



2N41 = Device code
YY = Year
WW = Week
Marking

Features

- Ultra low collector-to-emitter saturation voltage
- High DC current gain >100
- 3A continue collector current
- Small package PDFN3x2-8L.

Applications

- Charging circuit
- Power regulator
- Other power management in portable equipments

Order information

Device	Package	Shipping
WPT2N41-8/TR	PDFN3x2-8L	3000/Reel&Tape

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Collector-emitter voltage	V_{CEO}	-32	V
Collector-base voltage	V_{CBO}	-45	V
Emitter-base voltage	V_{EBO}	-6	V
Continues collector current [a]	I_C	-3	A
Continues collector current [b]		-2	A
Pulse collector current [c]	I_{CM}	-6	A
Power dissipation [a]	P_D	3.0	W
Power dissipation [b]		1.2	W
Junction Temperature	T_J	150	°C
Lead Temperature	T_L	260	°C
Storage Temperature Range	T_{stg}	-55~155	°C

a Surface mounted on FR-4 Board using 1 square inch pad size, 1oz copper

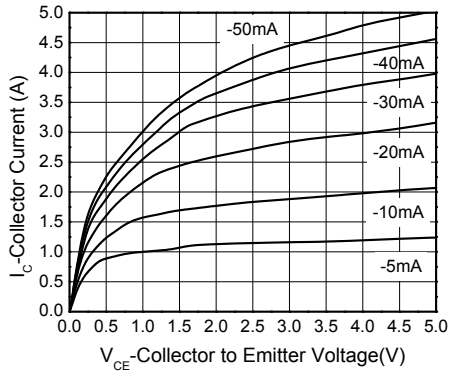
b Surface mounted on FR-4 board using minimum pad size, 1oz copper

c Pulse width=300μs, Duty Cycle<2%

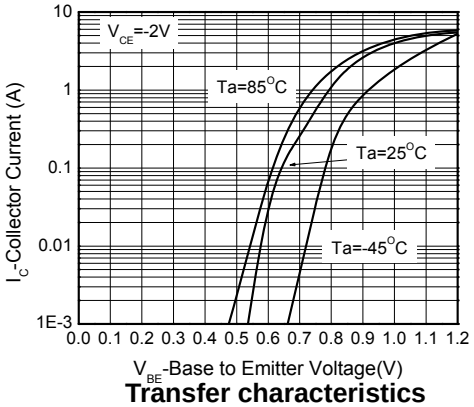
Electronics Characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV_{CEO}	I_C=-10mA, I_B=0mA	-32			V
Collector-base breakdown voltage	BV_{CBO}	I_C=-1mA, I_E=0mA	-45			V
Emitter-base breakdown voltage	BV_{EBO}	I_E=-100uA, I_C=0mA	-6			V
Collector cutoff current	I_{CBO}	V_{CB}=-40V			-100	nA
Emitter cutoff current	I_{EBO}	V_{EB}=-5V			-100	nA
Collector-emitter saturation voltage [c]	$V_{CE(sat)}$	I_C=-2A, I_B=-200mA		-0.2	-0.5	V
Base-emitter saturation voltage [c]	$V_{BE(sat)}$	I_C=-2A, I_B=-200mA		-1.0	-1.5	V
DC current gain [c]	h_{FE}	IC=-1A , VCE=-2V	100	200	320	

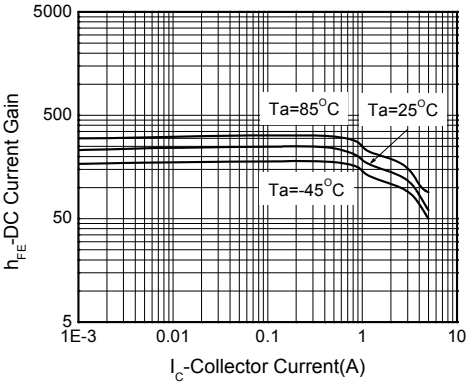
Typical Characteristics (Ta=25°C, unless otherwise noted)



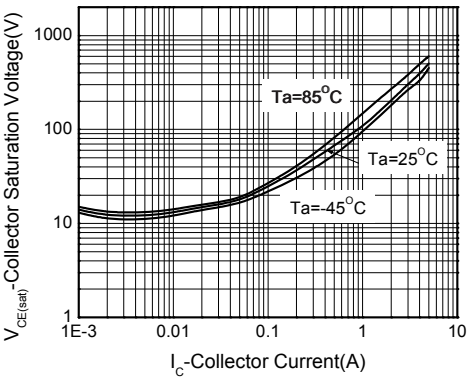
Output characteristics



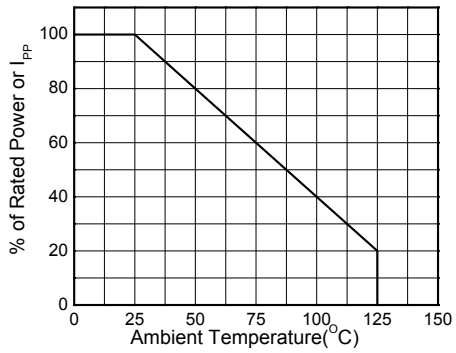
Transfer characteristics



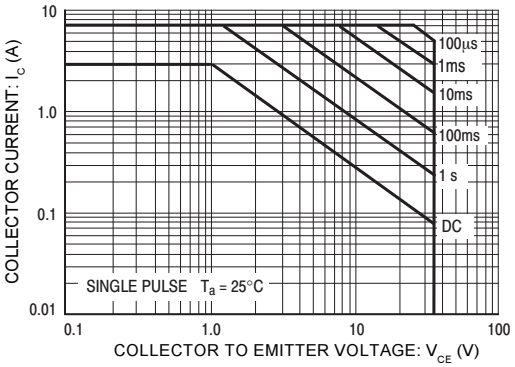
DC current gain



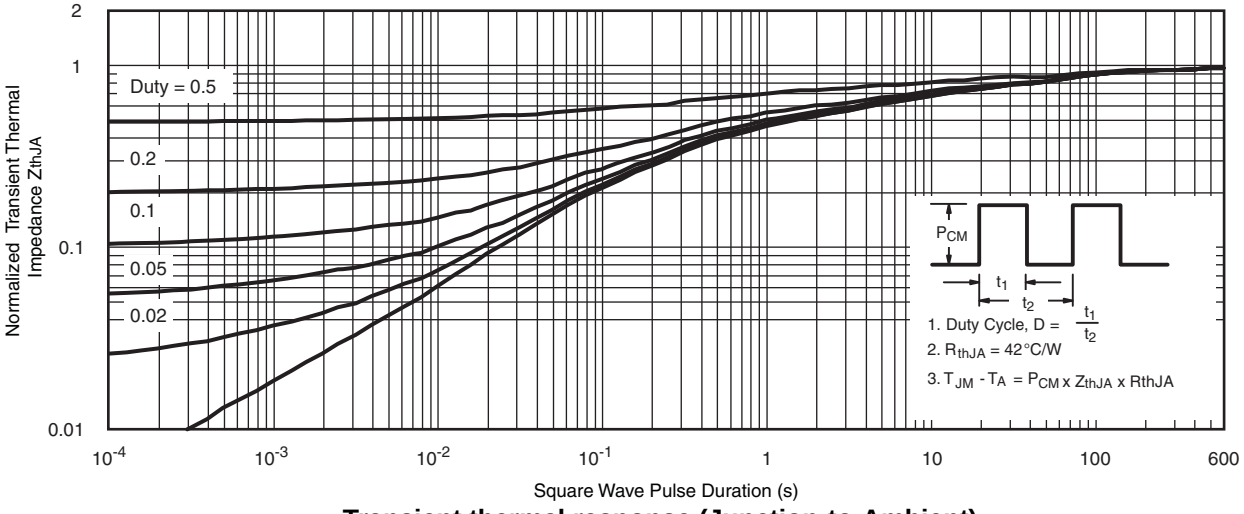
C-E saturation voltage vs. Collector current



Power Derating



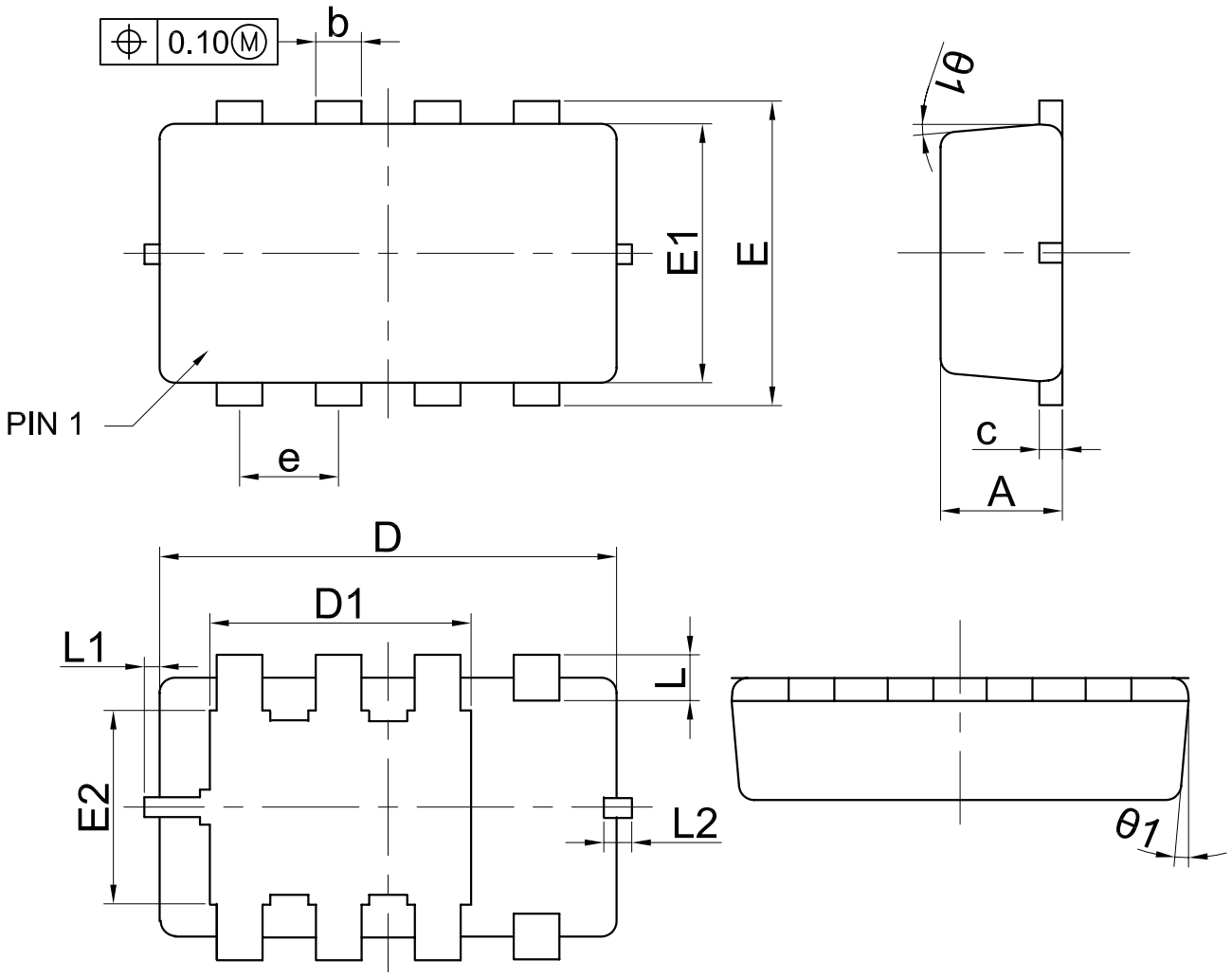
Safe operating area



Transient thermal response (Junction-to-Ambient)

Package outline dimensions

PDFN3x2-8L



Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.70	0.80	0.90
b	0.24	0.30	0.35
c	0.08	0.15	0.20
D	2.90	3.00	3.05
D1	1.52	1.62	1.72
E	1.90	2.00	2.10
E1	1.60	1.70	1.75
E2	1.07	1.17	1.27
e	0.65 BSC		
L	0.20	0.30	0.40
L1	0.00	—	0.10
L2	0.184MAX		
θ1	0°	5°	8°