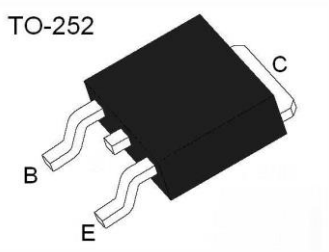
Application

• LED TV backlight



Features

• High brokendown voltage BV_{CEO} >150V
• h_{FE}> 100 for I_C=150mA, V_{CE}= 0.25V

Absolute Maximum Rating (Ta=25℃, unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-base voltage	BV_{CBO}	150	V
Collector-emitter voltage	BV_{CEO}	150	V
Emitter-base voltage	BV_{EBO}	7	V
Continuous collector current	I_C	1	A
Peak collector current	I_{CP}	3	A
Base current	I_B	0.5	A
Collector power dissipation	P_C	3.8	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55～150	℃

Thermal Characteristics (Ta=25℃, unless otherwise specified)

Parameter	Symbol	Value	Unit
Thermal resistance, junction to ambient	$R_{\theta JA}$	33	℃/W
Thermal resistance, junction to leads	$R_{\theta JL}$	12	℃/W

Electrical Characteristics (Ta=25℃, unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage*	BV_{CBO}	I_C = 100μA，I_E = 0	150			V
Collector-emitter voltage*	BV_{CEO}	I_C = 10mA，I_B = 0	150			V
Emitter-base voltage*	BV_{EBO}	I_E = 100μA，I_C = 0	7			V
Collector emittert cut-off current	I_{CES}	V_{CE}= 150V, V_{CE}= 0.			50	nA
Collector cut-off current	I_{CBO}	V_{CB} = 150V，I_E = 0			50	nA
Emitter cut-off current	I_{EBO}	V_{EB} = 7V，I_C = 0			50	nA
DC current gain*	$h_{FE}1$	V_{CE}= 0.2V，I_C= 85mA	60			
	$h_{FE}2$	V_{CE}= 0.25V，I_C= 150mA	100			
Collector-emitter saturation voltage*	$V_{CE(sat)}$	I_C = 100mA，I_B = 5mA			0.25	V
Base -emitter saturation voltage*	$V_{BE(sat)}$	I_C = 100mA，I_B = 5mA			0.95	V
Base -emitter turn on voltage*	V_{BEont}	V_{CE}= 0.25V，I_C= 150mA			0.95	
Transition frequency	f_T	V_{CE} = 5V，I_C = 150mA		140		MHz
Output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		14		pF
Delay time	t_d	V_{CC}= 120V，I_C= 150mA $-I_{B2}$ = 1.5mA, $V_{CE(ON)}$ = 0.25V		512		ns
Risetime	t_r			426		ns
Storage time	t_s			3413		ns
Fall time	t_f			321		ns
Storage time	t_s	V_{CC}= 120V，I_C= 150mA $-I_{B2}$ = 1.5mA, $V_{CE(ON)}$ = 4V		65		ns
Fall time	t_f			294		ns

Note: *Measured under pulsed conditions. Pulse width = 300μs. Duty cycle ≤ 2%

Typical Characteristics

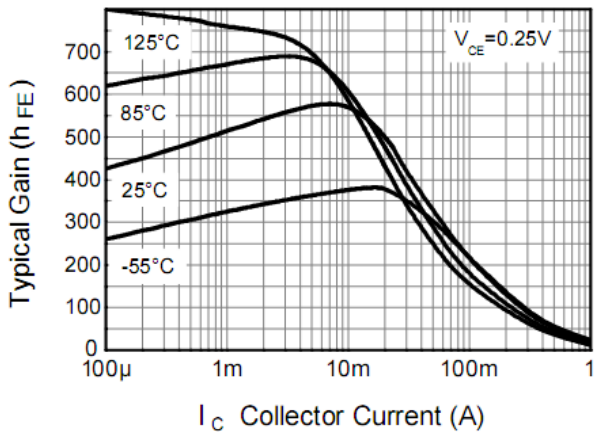


Figure.1 DC Current Gain

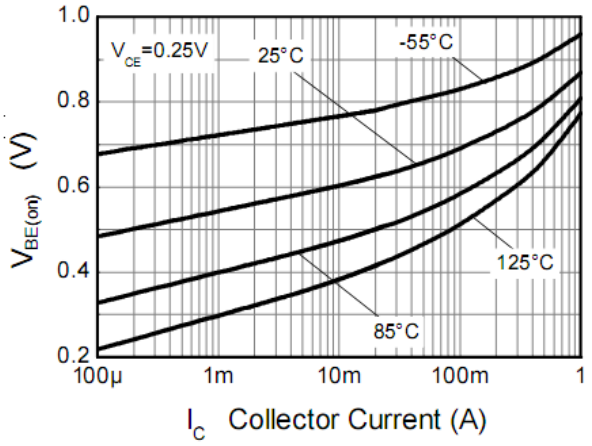


Figure.2 Base-Emitter on Saturation voltage

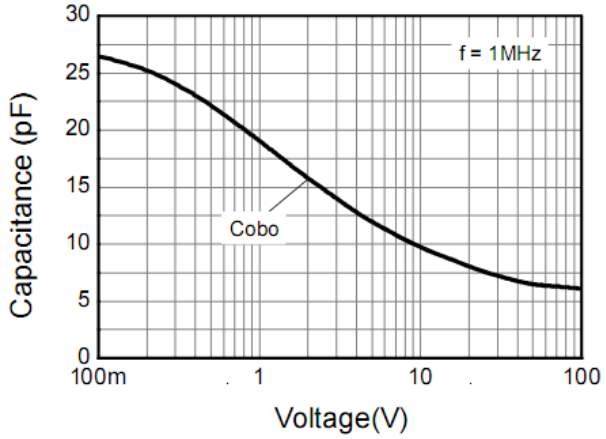


Figure.3 Collector Output Capacitance

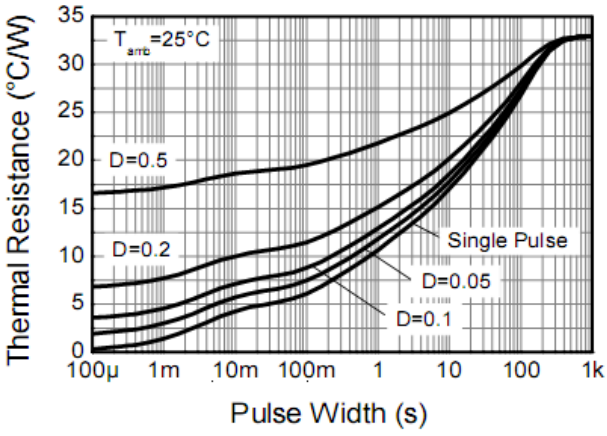


Figure.4 ransient Thermal Impedance

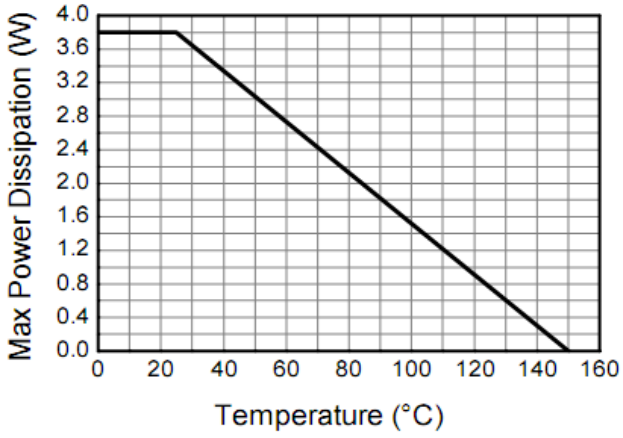


Figure.5. Derating Curve

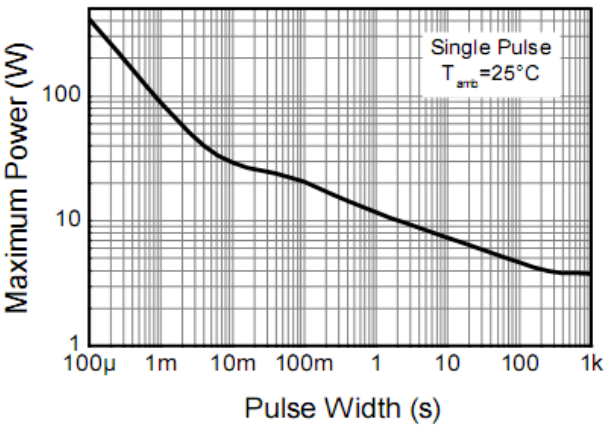
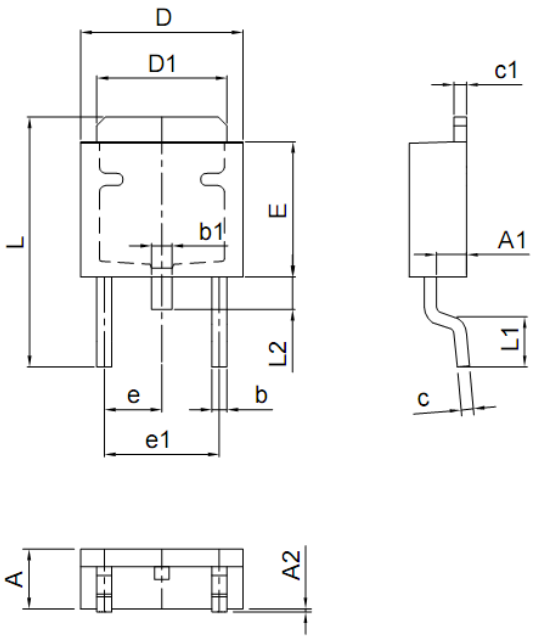


Figure 6. Pulse Power Dissipation

Package Dimensions



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.094
A1	1.00	1.40	0.039	0.055
A2	0.00	0.15	0.000	0.006
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.20	6.70	0.244	0.264
D1	5.10	5.50	0.201	0.217
E	5.50	6.00	0.217	0.236
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	9.70	10.40	0.382	0.409
L1	1.40	1.70	0.055	0.063
L2	0.60	1.20	0.024	0.047

NOTICE

The information presented in this document is for reference only. Involving product optimization and productivity improvement, ChipNobo reserves the right to adjust product indicators and upgrade some technical parameters. ChipNobo is entitled to be exempted from liability for any delay or non-delivery of the information disclosure process that occurs.
本文件中提供的信息仅供参考。涉及产品优化和生产效率改善，ChipNobo 有权调整产品指标和部分技术参数的升级，所出现信息披露过程存在延后或者不能送达的情形，ChipNobo 有获免责权。

The product listed herein is designed to be used with residential and commercial equipment, and do not support sensitive items and specialized equipment in areas where sanctions do exist. ChipNobo Co., Ltd or anyone on its behalf, assumes no responsibility or liability for any damages resulting from improper use.
此处列出的产品旨在民用和商业设备上使用，不支持确有制裁地区的敏感项目和特殊设备，ChipNobo 有限公司或其代表，对因不当使用而造成的任何损害不承担任何责任。

For additional information, please visit our website https://www.chipnobo.com/en or consult your nearest Chipnobo sales office for further assistance.
欲了解更多信息，请访问我们的网站 https://www.chipnobo.com/en，或咨询离您最近的 Chipnobo 销售办事处以获得进一步帮助。