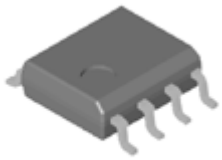
RED3032

Dual 3A Fast-switching high-voltage NPN Power Transistor

Features

- High Voltage Capability
- Very High Switching Speed
- High Reliability
- High current capability



Small SO7 Package

Applications

- LED lighting
- High Frequency SMPS
- Fluorescent Ballasts

Description

These devices are designed for operation in high voltage high speed circuits, where fast switching in inductive circuits is critical. The transistor has been optimized for low fall-times in order to minimize switching losses.

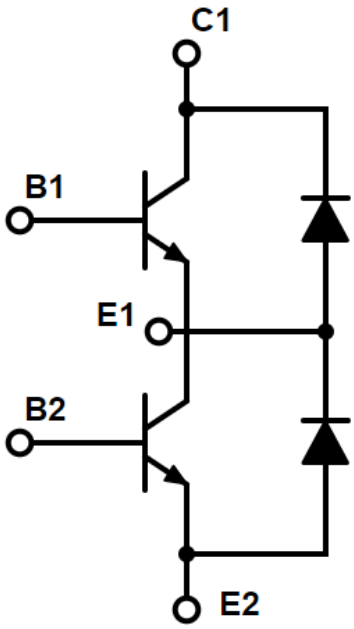


Figure 1: Block diagram

Table 1: Order Codes

Part number	Package	Packaging
RED3032AD-TR13	SO7	Tape and Reel

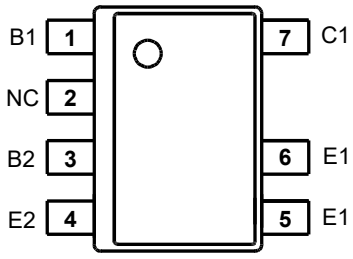


Figure 2: SO7 pin connections (top view)

Table 2: Absolute Maximum Rating

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	680	V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)	380	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current	3	A
I_{CM}	Collector Peak Current (t < 5ms)	6	A
T_{stg}	Storage Temperature	-55 - +150	°C
T_J	Max. Operating Junction Temperature	150	°C

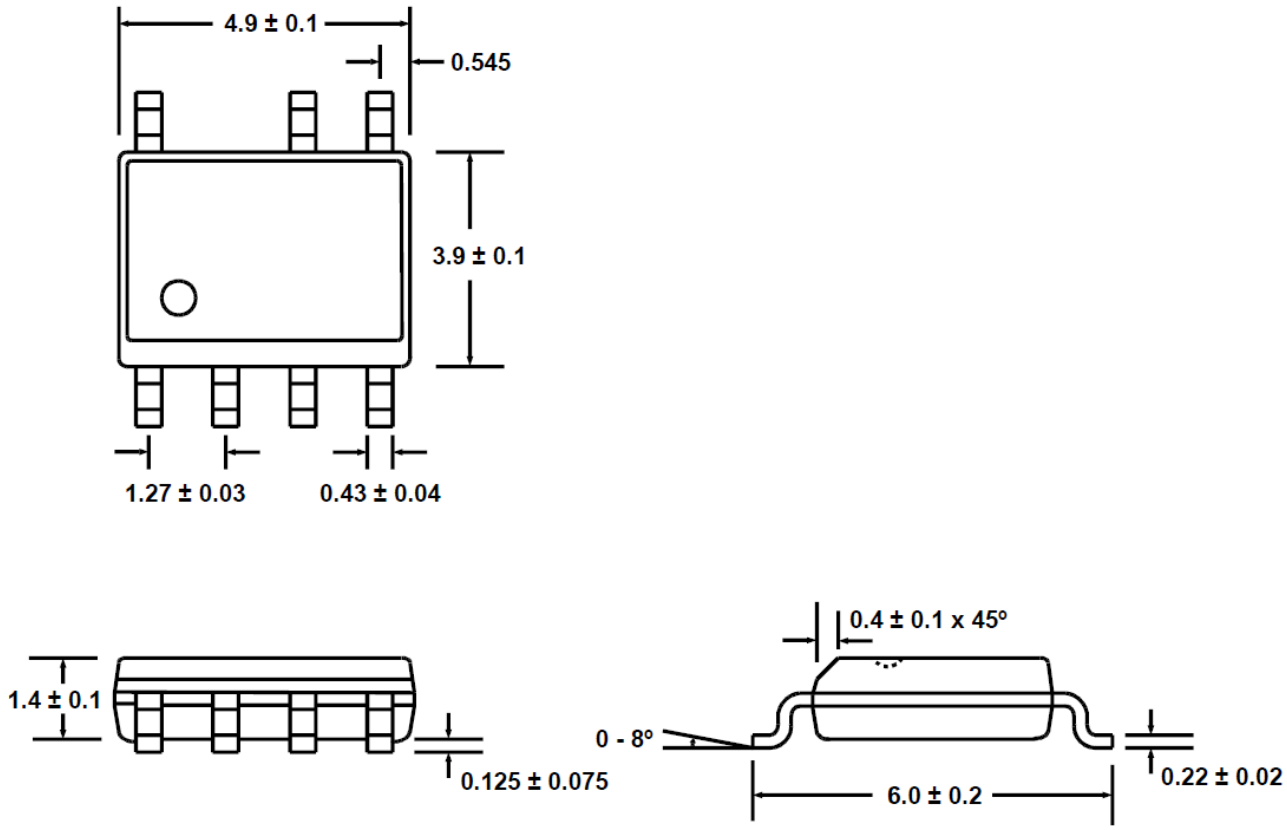
Table 3: Electrical Characteristics (T_{case} = 25°C)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 0.1mA	680			V
I_{CBO}	Collector – Base Leakage Current	V_{CE} = 680V, I_E = 0			0.1	mA
$V_{(BR)CEO}$	Collector – Emitter Breakdown Voltage	I_C = 0.1mA	380			V
I_{CEO}	Collector – Emitter Leakage Current	V_{CE} = 380V, I_C = 0			0.1	mA
$V_{(BR)EBO}$	Emitter – Base Breakdown Voltage	I_E = 0.1mA	9			V
I_{EBO}	Emitter – Base Leakage Current	V_{EB} = 9V, I_C = 0			0.1	mA
$V_{CE(sat)}$	Collector - Emitter Saturation Voltage	I_C = 1A , I_B = 0.2A			0.3	V
$V_{BE(sat)}$	Base - Emitter Saturation Voltage	I_C = 1A , I_B = 0.2A			1.2	V
h_{FE}	Current Gain	V_{CE} = 5V, I_C = 0.2A	15		30	
t_s	Storage Time	I_C = 0.25A	1.5		3	µs
t_r	Rising Time	I_C = 0.25A			0.7	µs
t_f	Falling Time	I_C = 0.25A			0.7	µs
f_t	Gain Bandwidth	V_{CE} = 10V, I_C = 0.1A , f = 1MHz	5			MHz

PACKAGE INFORMATION

Package Dimensions

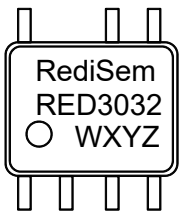
SO7 package dimensions are shown below. All units are in mm.



Available packages

Package type	Part number	Moisture Sensitivity Level (MSL)	Packaging
SO7	RED3032AD-TR13	3 (JEDEC J-STD-020)	Tape and reel 4000pcs/13” reel

Package Marking



SO7 top-side marking for RED3032

RED3032= Part Number

WXYZ= Lot Code, e.g. AAAA, AAAB

Status

The status of this Datasheet is shown in the footer.

Status	Product Status	Definition
Preview	In development	The Datasheet contains target specifications relating to design and development of the described IC product.
Preliminary	In qualification	The Datasheet contains preliminary specifications relating to functionality and performance of the described IC product.
Production	In production	The Datasheet contains specifications relating to functionality and performance of the described IC product which are supported by testing during development and production.

Contact Details

RediSem Ltd.
218-219 Photonics Centre
No 2 Science Park East Avenue
Hong Kong Science & Technology Park
Shatin, New Territories
Hong Kong

Tel. +852 2607 4141
Fax. +852 2607 4140
Email: info@redisem.com
Web: www.redisem.com

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