

22.January 2009 release

Ultra Small Xenon Flash IGBT for Cell Phone

Achieved ICP=150A with small 2.8mm x 2.9mm size first in the industry

Mount height 0.9mm!

The industry's smallest size* that is optimal for mounting on cell phones with a camera.

* : as of January 22 2009

TIG058E8

Mass production

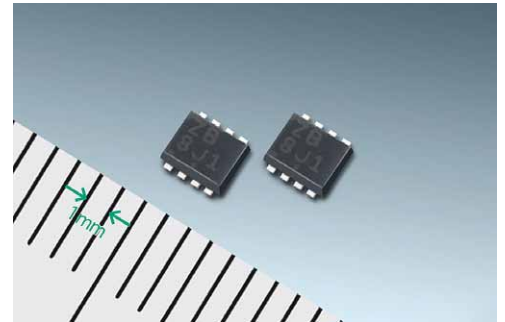
: starts from May 2009

3MPcs/Month(peak time)

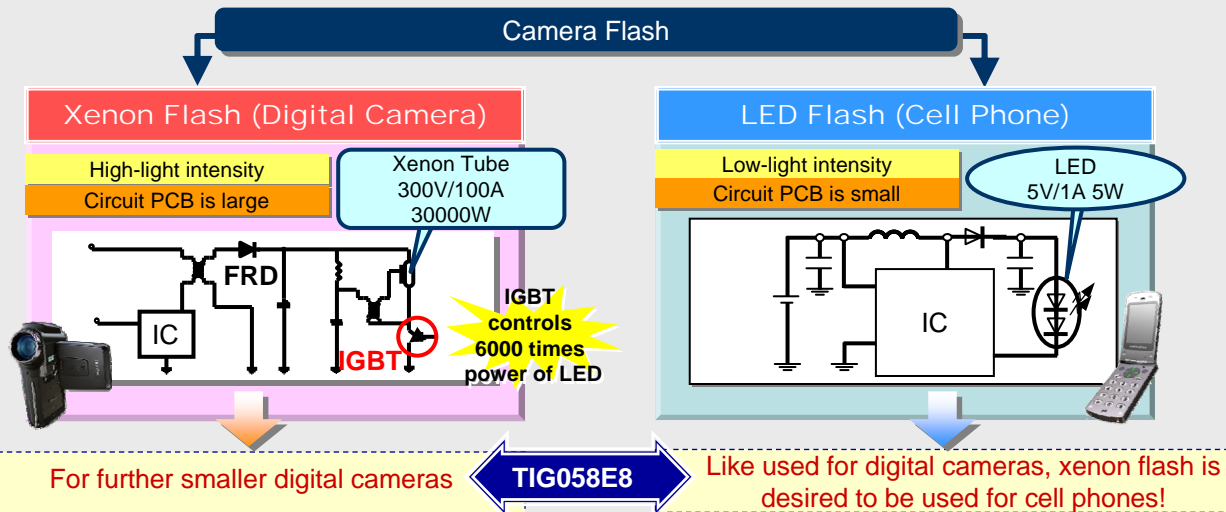
Sample price : \$2.5

Target Market

- cell phones with camera
- ultra small digital cameras



Market demand and TIG058E8's features



[TIG058E8] The industry's smallest mount area 8.12mm² / Mount height 0.9mm / ICP=150A

Comparison with Current Products

	TIG030TS	TIG058E8
PKG	TSSOP8	ECH8
Mount Area	19.2mm ²	8.12mm ²
Height	1.0mm	0.9mm
Drive Voltage	4V	4V
V _{CES}	400V	400V
V _{GES}	±6V	±6V
I _{CP}	150A	150A
dVCE/dt	400V/μs	400V/μs

Current:
TIG030TS

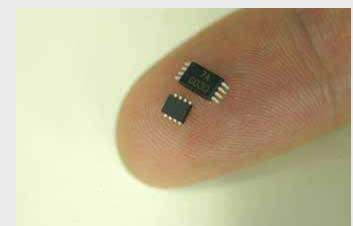
19.2mm²

New:
TIG058E8

8.12mm²

Mount area: **Approx. 60% reduced!**

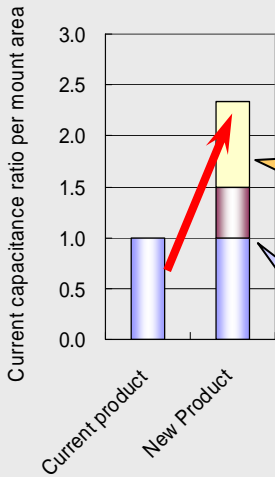
Height: **Approx. 10% reduced!**



TIG058E8 keeps the same performance while achieving approx. 60% reduction in area & approx. 10% reduction in height!

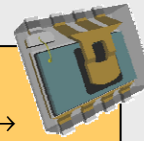
*: Please be forewarned that the above-stated including prices and specifications are all as of the time of the press release, which maybe differ from the latest information.

The New Product Tech.



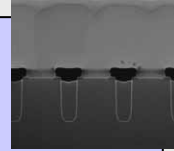
Packaging tech.

- electrode structure optimization → chip operation efficiency 20% UP
- chip mounting efficiency 10% UP
- low wiring resistance (below 1/3)



Wafer tech.

- cell structure optimization → performance 20% improved
- peripheral voltage structure optimization → effective operation area 20% improved



Mass production tech.

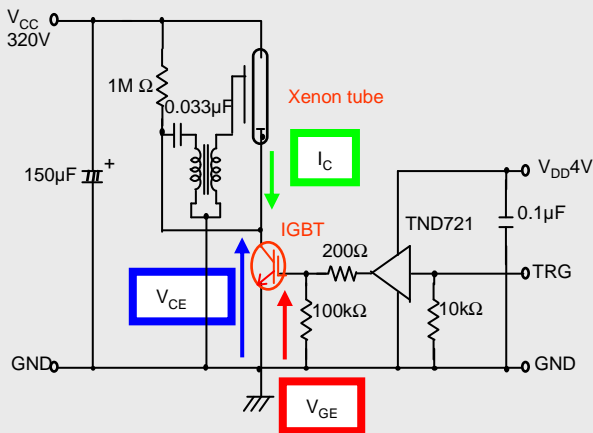
Large-current (≥150A) measurable MP technology & new manufacturing line.

TIG058E8 Operation Waveform

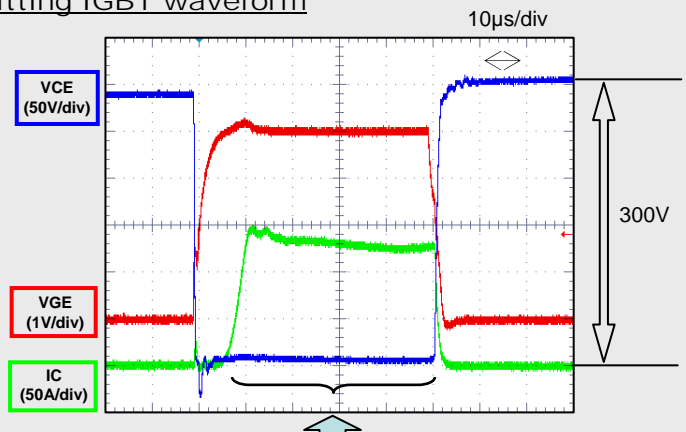
Testing Circuit

[condition]

$V_{CC}=320V$, $V_{GE}=4V$, $R_G=200\Omega$, $C_M=400\mu F$



Emitting IGBT waveform



Green line region: xenon tube is emitting.

CP=150A emitting operation is realized with the industry's smallest size product!

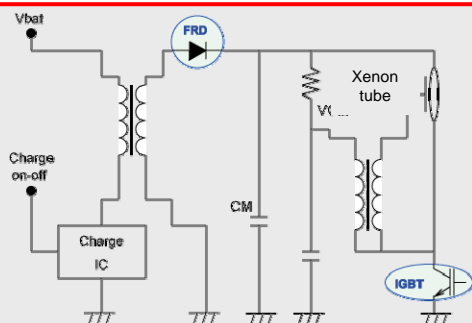
Xenon Flash Circuit Solution

RE0208DA

- VRRM: 800V · trr: typ.33nsec
- The industry's smallest 2-pin package: SOD-323

Specifications

V_{RRM} (V)	I_O (A)	V_F		I_R		trr (ns)
		I_F (A)	typ/max (V)	V_R (V)	max (μA)	
800	0.2	0.10	3.2/4.0	800	50	33/55



IGBT Series

Package (WxDxH)	Type No.	V_{CES}	I_{CP}	$V_{GE(off)}$ $V_{CE}=10V, I_C=1mA$	
ECH8 (2.9x2.8x0.9)	TIG058E8	400V	150A	min 0.5V	max 1.2V
TSSOP8 (3.0x6.4x1.0)	TIG030TS	400V	150A	min 0.5V	max 1.2V
	TIG032TS	400V	180A	min 0.4V	max 1.0V
SOP8 (5.0x6.0x1.8)	TIG014SS	400V	150A	min 0.5V	max 1.2V