

PRELIMINARY

January 2002

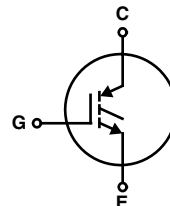
6A, 600V, UFS Series N-Channel IGBTs

Features

- 6A, 600V at $T_C = 25^\circ\text{C}$
- 600V Switching SOA Capability

Formerly developmental type TA49113.

Symbol



Electrical Specifications $T_C = 25^\circ\text{C}$, Unless Otherwise Specified

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Collector to Emitter Breakdown Voltage	BV_{CES}	$I_C = 250\mu\text{A}$, $V_{GE} = 0\text{V}$	600	-	-	V
Collector to Emitter Leakage Current	I_{CES}	$V_{CE} = BV_{CES}$, $T_C = 25^\circ\text{C}$	-	-	250	μA
Collector to Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = I_{C110}$, $V_{GE} = 15\text{V}$, $T_C = 25^\circ\text{C}$	-	1.65	2.0	V
Gate to Emitter Threshold Voltage	$V_{GE(TH)}$	$I_C = 250\mu\text{A}$, $V_{CE} = V_{GE}$, $T_C = 25^\circ\text{C}$	3.0	5.5	6.0	V
Gate to Emitter Leakage Current	I_{GES}	$V_{GE} = \pm 25\text{V}$	-	-	± 250	nA

Die Characteristics

DIE DIMENSIONS:

74 mils x 98 mils x 14 mils

WAFER DIAMETER:

5in with Standard Flat

PASSIVATION:

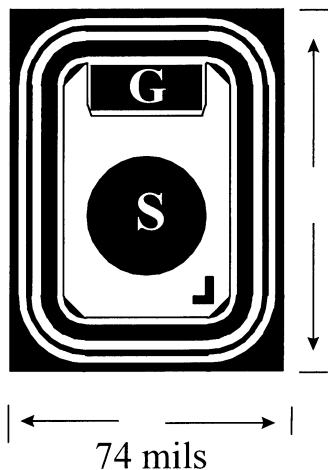
Nitride Thickness: $17\text{k}\text{\AA} \pm 1.5\text{k}\text{\AA}$

FRONTSIDE METALLIZATION:

Type: Al

Metallization Mask Layout

PCG3N60C3W



S = SOURCE = 32mils ROUND

G = GATE = 32 X 16mils

98 mils

74 mils

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FAST®	OPTOLOGIC™	SMART START™	VCX™
Bottomless™	FASTr™	OPTOPLANAR™	STAR*POWER™	
CoolFET™	FRFET™	PACMAN™	Stealth™	
CROSSVOLT™	GlobalOptoisolator™	POP™	SuperSOT™-3	
DenseTrench™	GTO™	Power247™	SuperSOT™-6	
DOMETM	HiSeC™	PowerTrench®	SuperSOT™-8	
EcoSPARK™	ISOPLANAR™	QFET™	SyncFET™	
E ² CMOS™	LittleFET™	QST™	TinyLogic™	
EnSigna™	MicroFET™	QT Optoelectronics™	TruTranslation™	
FACT™	MicroPak™	Quiet Series™	UHC™	
FACT Quiet Series™	MICROWIRE™	SILENT SWITCHER®	UltraFET®	

STAR*POWER is used under license

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.