



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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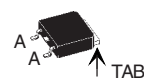
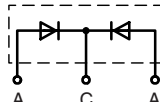
Gallium Arsenide Schottky Rectifier

Second generation

$$V_{RRM} = 180 \text{ V}$$

$$I_{DC} = 24 \text{ A}$$

$$C_{Junction} = 21 \text{ pF}$$

Type	Marking on product	Circuit	Package
DGS 15-018CS	15A180AS	Single 	TO-252 AA 
DGSK 32-018CS	DGSK 32-018CS	Common cathode 	TO-263 AB  A = Anode, TAB = Cathode

Diode					
Symbol	Conditions	Maximum Ratings			
$V_{RRM/RSM}$		180		V	
I_{FAV}	$T_C = 25^\circ\text{C}; \text{DC}$	24		A	
I_{FAV}	$T_C = 90^\circ\text{C}; \text{DC}$	15		A	
I_{FSM}	$T_{VJ} = 45^\circ\text{C}; t_p = 10 \text{ ms (50 Hz), sine}$	80		A	
P_{tot}	$T_C = 25^\circ\text{C}$	34		W	
Symbol	Conditions	Characteristic Values			
		min.	typ.	max.	
V_F	$I_F = 7.5 \text{ A}; T_{VJ} = 25^\circ\text{C}$	1.25		1.5	V
	$I_F = 7.5 \text{ A}; T_{VJ} = 125^\circ\text{C}$		1.0		V
I_R	$V_R = V_{RRM}; T_{VJ} = 25^\circ\text{C}$			0.25	mA
	$V_R = V_{RRM}; T_{VJ} = 125^\circ\text{C}$		0.25		mA
I_{RM}	$I_F = 5 \text{ A}; -di_F/dt = 150 \text{ A}/\mu\text{s};$ $V_R = 100 \text{ V}; T_{VJ} = 125^\circ\text{C}$	1.1			A
t_{rr}		23			ns
C_J	$V_R = 100 \text{ V}; T_{VJ} = 125^\circ\text{C}$	21			pF
R_{thJC}				4.4	K/W

Data according to IEC 60747 and per diode unless otherwise specified

Component					
Symbol	Conditions	Maximum Ratings			
T_{VJ}		-55...+175		$^\circ\text{C}$	
T_{stg}		-55...+150		$^\circ\text{C}$	
Symbol	Conditions	Characteristic Values			
		min.	typ.	max.	
Weight	TO-252	0.3			g
	TO-263	2			g

IXYS reserves the right to change limits, Conditions and dimensions.

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Features

GaAs Schottky Diode with Enhanced Barrier Height:

- lowest operating forward voltage drop due to additional injection of minority carriers
- high switching speed
 - low junction capacity of GaAs diode independent from temperature
 - short and low reverse recovery current peak due to short lifetime of minority carriers
 - soft turn off

Surface Mount Packages:

- Incorporating Single and Dual Diode Topologies
- Industry Standard Package Outlines
- Epoxy meets UL 94V-0

Applications

Switched Mode Power Supplies:

- AC-DC converters
 - DC-DC converters
- with:*
- high switching frequency
 - high efficiency
 - low EMI
- for use e. g. in:*
- telecom
 - computer
 - automotive equipment

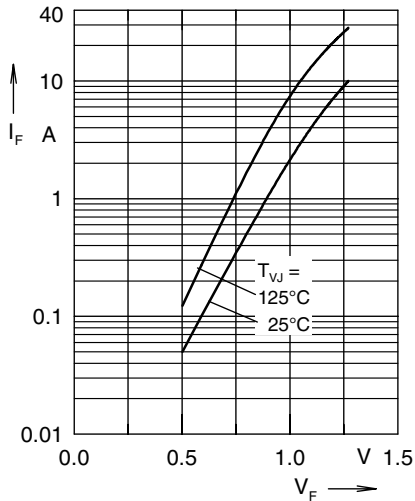


Fig. 1 typ. forward characteristics

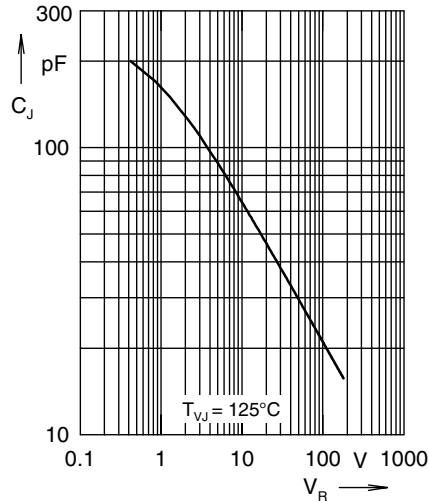


Fig. 2 typ. junction capacity versus blocking voltage

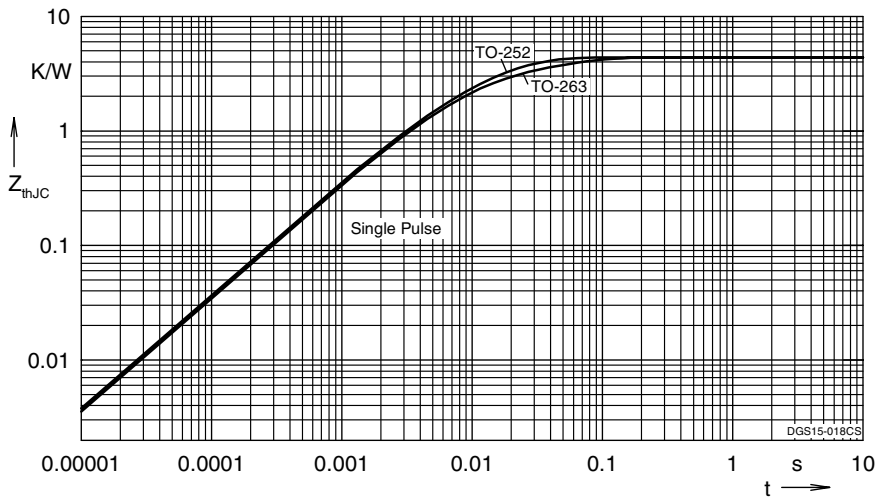
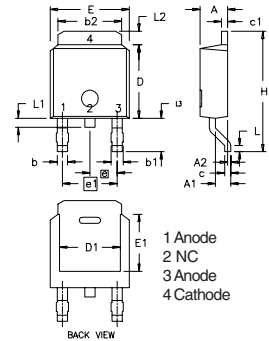


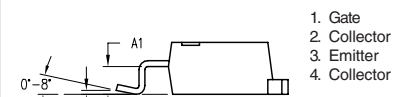
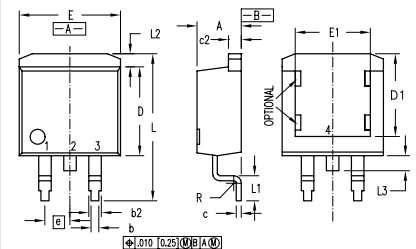
Fig. 3 typ. thermal impedance junction to case

Outlines TO-252 AA



Dim.	Millimeter	Inches
	Min. Max.	Min. Max.
A	2.19 2.38	0.086 0.094
A1	0.89 1.14	0.035 0.045
A2	0 0.13	0 0.005
b	0.64 0.89	0.025 0.035
b1	0.76 1.14	0.030 0.045
b2	5.21 5.46	0.205 0.215
c	0.46 0.58	0.018 0.023
c1	0.46 0.58	0.018 0.023
D	5.97 6.22	0.235 0.245
D1	4.32 5.21	0.170 0.205
E	6.35 6.73	0.250 0.265
E1	4.32 5.21	0.170 0.205
e	2.28 BSC	0.090 BSC
e1	4.57 BSC	0.180 BSC
H	9.40 10.42	0.370 0.410
L	0.51 1.02	0.020 0.040
L1	0.64 1.02	0.025 0.040
L2	0.89 1.27	0.035 0.050
L3	2.54 2.92	0.100 0.115

Outlines TO-263 AB



Dim.	Millimeter	Inches
	Min. Max.	Min. Max.
A	4.06 4.83	.160 .190
A1	2.03 2.79	.080 .110
b	0.51 0.99	.020 .039
b2	1.14 1.40	.045 .055
c	0.46 0.74	.018 .029
c2	1.14 1.40	.045 .055
D	8.64 9.65	.340 .380
D1	8.00 8.89	.315 .350
E	9.65 10.29	.380 .405
E1	6.22 8.13	.245 .320
e	2.54 BSC	.100 BSC
L	14.61 15.88	.575 .625
L1	2.29 2.79	.090 .110
L2	1.02 1.40	.040 .055
L3	1.27 1.78	.050 .070
L4	0 0.20	0 .008
R	0.46 0.74	.018 .029

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