



GP4516ISRT GENERAL PURPOSE RECTIFIER

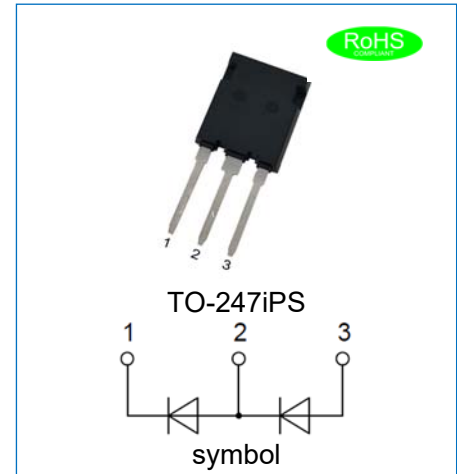
Rev.0.1

DESCRIPTION

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ Glass passivated chip junction
- ✧ Lead free in compliance with EU RoHS 2011/65/EU directive
- ✧ Insulation (2500V_{RMS}) allows placement on same heatsink as mosfet and flexible heatsinking on common or separate heatsink

MECHANICAL DATA

- ✧ Case: TO-247iPS, molded plastic over passivated junction
- ✧ Terminals: Solder plated, solderable per J-STD-002



ABSOLUTE MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS(Per diode)

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	GP4516ISRT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	1600	V
Maximum RMS voltage	V_{RMS}	1120	V
Maximum DC blocking voltage	V_{DC}	1600	V
Average forward current at $T_C=100^\circ\text{C}$	$I_{F(AV)}$	45	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	360	A
Maximum forward voltage @ $I_F=45\text{A}$	V_F	1.2	V
Maximum DC reverse current at rated DC blocking voltage	$T_j=25^\circ\text{C}$	10	μA
	$T_j=150^\circ\text{C}$	1.5	mA
Typical junction capacitance $V_R=4.0\text{V}$, $f=1\text{MHz}$	C_J	240	pF
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

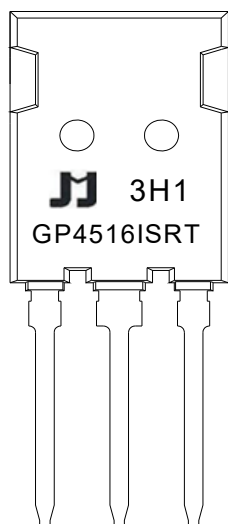
ISOLATION CHARACTERISTICS

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$V_{isol(RMS)}$	RMS isolation voltage	50Hz \leq f \leq 60Hz, RH \leq 65%, from all pins to external heatsink, sinusoidal waveform, clean and dust free	-	-	2500	V
C_{isol}	Isolation capacitance	from cathode to external heatsink	-	10	-	pF

THERMAL RESISTANCES

Symbol	Parameter	GP4516ISRT	Unit
$R_{th(j-c)}$	Junction to case	1.0	$^{\circ}$ C/W

MARKING



G	General Purpose Rectifier
P	Pin
45	$I_{F(AV)}=45A$
16	$V_{RRM}:1600V$
IS	Insulation package: TO-247iPS
RT	Reverse tandem

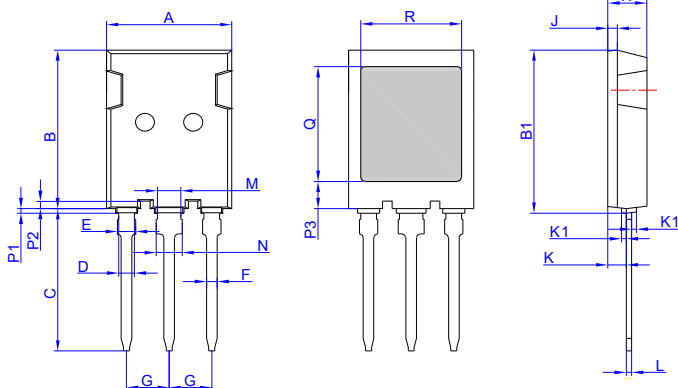
$\underline{x}H1$: Month, 1/2/3~9/A/B/C

$3\underline{x}1$:

2018	2019	2020	2021	2022	2023	2024
H	I	J	K	L	M	N
2025	2026	2027	2028	2029	2030	...
O	P	Q	R	S	T	...

$3H\underline{x}$: Batch number

PACKAGE MECHANICAL DATA



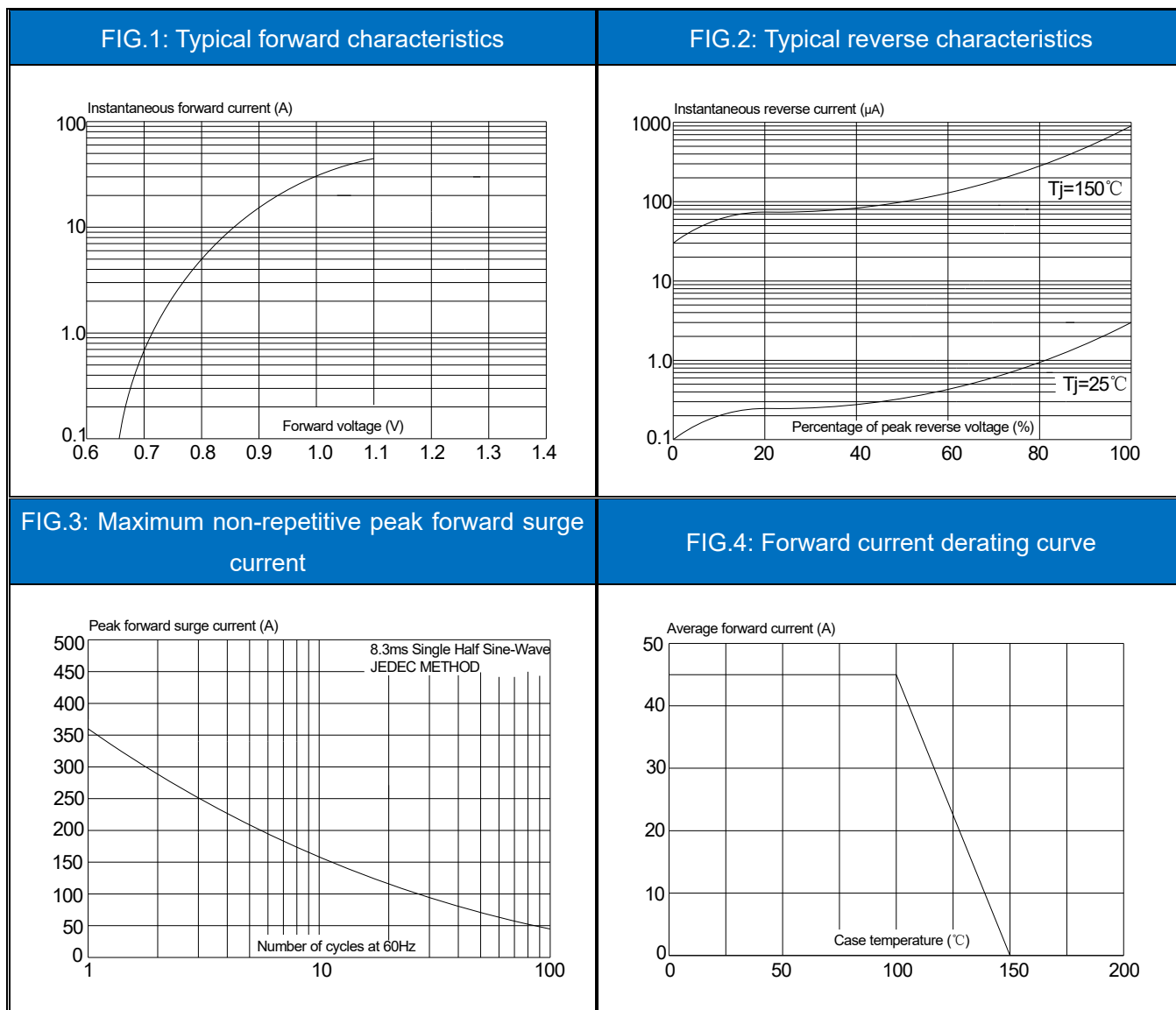
TO-247iPS

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.70	16.00	16.30	0.618	0.630	0.642
B	21.80	22.00	22.20	0.858	0.866	0.874
B1	22.30	22.50	22.70	0.878	0.886	0.894
C	19.40	19.70	20.00	0.764	0.776	0.787
D	1.80	2.00	2.20	0.071	0.079	0.087
E	2.15	2.35	2.55	0.085	0.093	0.100
F	1.16	1.36	1.56	0.046	0.054	0.061
G	5.25	5.45	5.65	0.207	0.215	0.222
H	4.80	5.00	5.20	0.189	0.197	0.205
J	1.10	1.20	1.30	0.043	0.047	0.051
K	2.20	2.35	2.50	0.087	0.093	0.098
K1	0.45	0.60	0.75	0.018	0.024	0.030
L	0.51	0.70	0.89	0.020	0.028	0.035
M	2.80	3.00	3.20	0.110	0.118	0.126
N	3.15	3.35	3.55	0.124	0.132	0.140
P1	0.44	0.64	0.84	0.017	0.025	0.033
P2	0.80	1.00	1.20	0.031	0.039	0.047
P3	3.55	3.75	3.95	0.140	0.148	0.156
Q	12.60	12.90	13.20	0.496	0.508	0.520
R	15.55	15.85	16.15	0.612	0.624	0.636

PACKAGE INFORMATION-TO-247iPS

OUTLINE	TUBE (PCS)	PER CARTON (PCS)
TUBE	30	2,250

CHARACTERISTICS CURVE




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