



SANYO Semiconductors

DATA SHEET

P-Channel Silicon MOSFET

2SJ455 — General-Purpose Switching Device Applications

Features

- Low ON-state resistance.
- High-speed switching.
- Surface mount type device making the following possible.
 - Reduction in the number of manufacturing processes for 2SJ455-applied equipment.
 - High density surface mount applications.
 - Small size of 2SJ455-applied equipment.

Specifications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-250	V
Gate-to-Source Voltage	V_{GSS}		± 30	V
Drain Current (DC)	I_D		-7	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-28	A
Allowable Power Dissipation	P_D	$T_c=25^\circ\text{C}$	45	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1\text{mA}$, $V_{GS} = 0\text{V}$	-250			V
Gate-to-Source Breakdown Voltage	$V_{(BR)GSS}$	$I_G = \pm 100\mu\text{A}$, $V_{DS} = 0\text{V}$	± 30			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -250\text{V}$, $V_{GS} = 0\text{V}$			-1.0	mA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 25\text{V}$, $V_{DS} = 0\text{V}$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -10\text{V}$, $I_D = -1\text{mA}$	-2.0		-3.0	V

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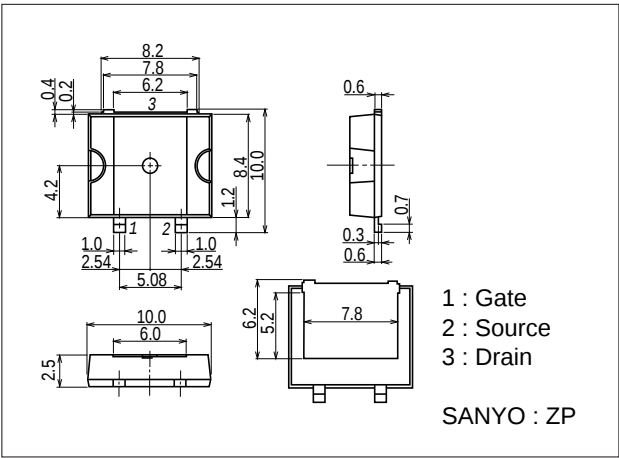
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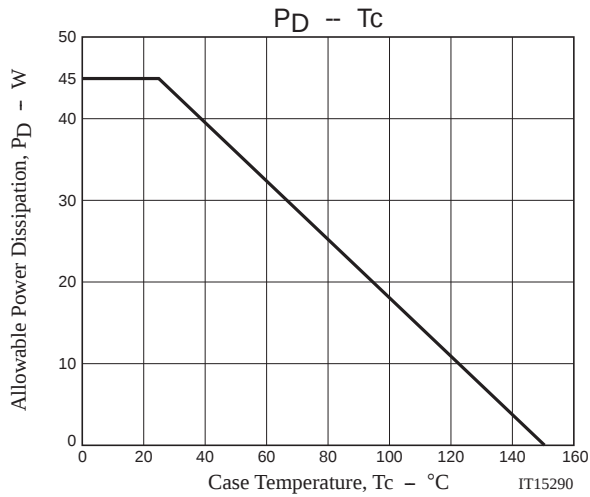
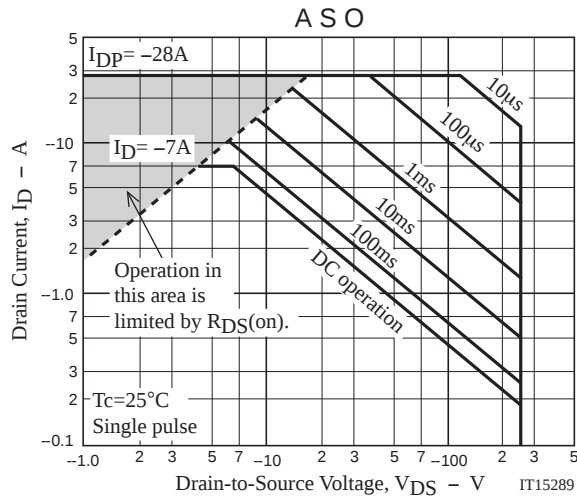
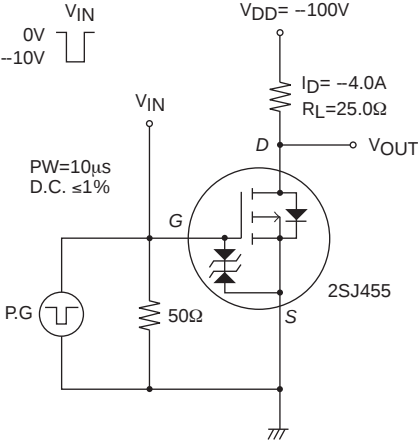
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-4A	3.6	6.0		S
Static Drain-to-Source On-State Resistance	R _{DS(on)}	I _D =-4A, V _{GS} =-10V		0.6	0.85	Ω
Input Capacitance	C _{iss}	V _{DS} =-20V, f=1MHz		1290		pF
Output Capacitance	C _{oss}	V _{DS} =-20V, f=1MHz		330		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =-20V, f=1MHz		155		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		22		ns
Rise Time	t _r	See specified Test Circuit.		90		ns
Turn-OFF Delay Time	t _{d(off)}	See specified Test Circuit.		300		ns
Fall Time	t _f	See specified Test Circuit.		95		ns
Diode Forward Voltage	V _{SD}	I _S =-7A, V _{GS} =0V		-1.0	-1.5	V
Diode Reverse Recovery Time	t _{rr}	I _S =-7A, di / dt=100A / μs		160		ns

Package Dimensions

unit : mm (typ)
7002-001



Switching Time Test Circuit



Note on usage : Since the 2SJ455 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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