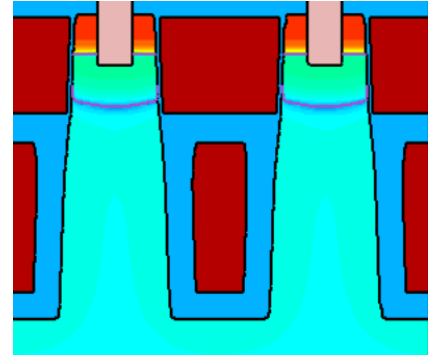


# SGT TRENCH MOSFET N-CHANNEL

## General Description

- Trench Power **SGT** technology
- **Low  $R_{DS(ON)}$**
- ESD protected
- Available in **6" wafers**

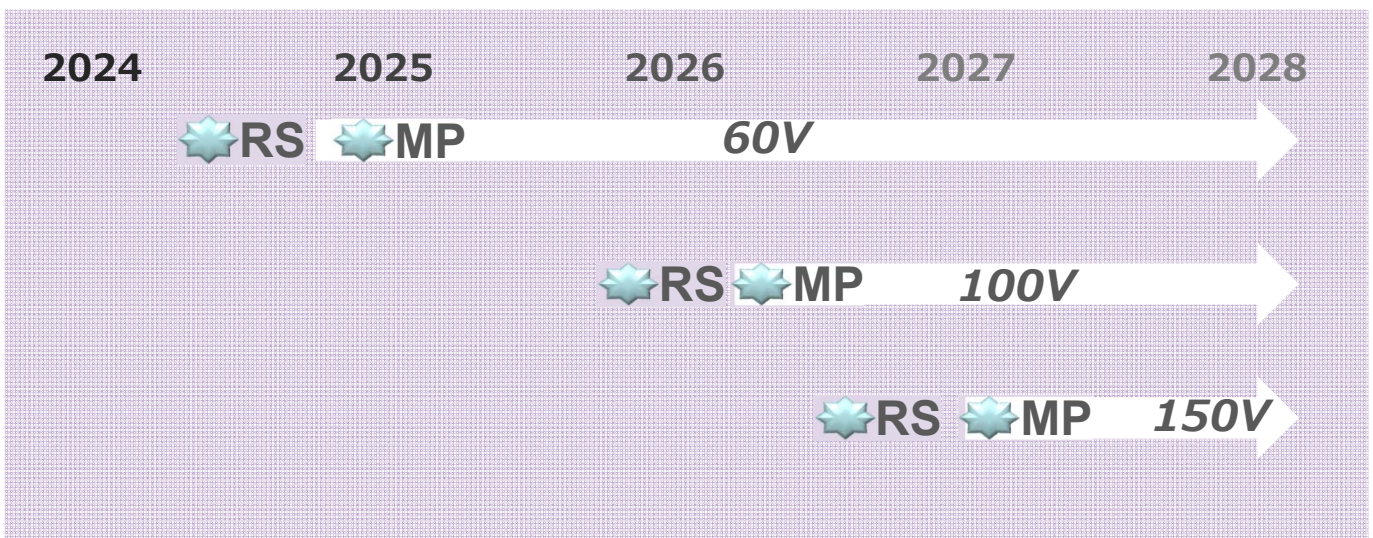


*New SGT Product*

## Product Summary

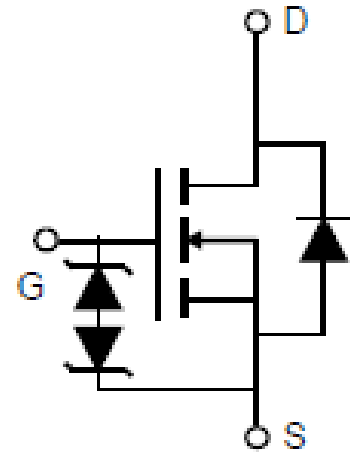
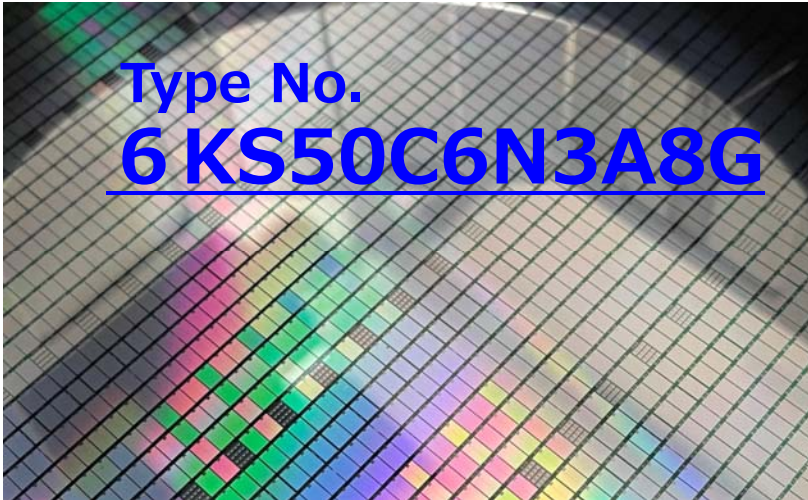
- $V_{DSS}$  **60V** (100V, 150V development planned)
- $V_{GSS}$  20V (8V possible)
- $R_{DS(ON)}$  **5m $\Omega$**
- $I_D$  40A (Capable of handling various currents)

## Road Map



# Sprit Gate MOS FET

## 60V N-CHANNEL MOSFET



• Available in 6" wafers

## Electrical Characteristics

**STATIC PARAMETERS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

SYMBOL	PARAMETER	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
BVDSS	Drain-Source Breakdown Voltage	$I_D=250\mu\text{A}$ , $V_{GS}=0\text{V}$	60			V
IDSS	Zero Gate Voltage Drain Current	$V_{DS}=60\text{V}$ , $V_{GS}=0\text{V}$			1.0	$\mu\text{A}$
IGSS	Gate-Body leakage current	$V_{DS}=0\text{V}$ , $V_{GS}=\pm 20\text{V}$			$\pm 10$	$\mu\text{A}$
VGS(th)	Gate Threshold Voltage	$V_{DS}=V_{GS}$ , $I_D=250\mu\text{A}$	1.2	1.7	2.2	V
RDS(ON)	Static Drain-Source On-Resistance	$V_{GS}=10\text{V}$ , $I_D=20\text{A}$		5	8	$\text{m}\Omega$
		$V_{GS}=4.5\text{V}$ , $I_D=20\text{A}$		7.4	11	$\text{m}\Omega$
gFS	Forward Transconductance	$V_{DS}=5\text{V}$ , $I_D=20\text{A}$		40		S
VSD	Diode Forward Voltage	$I_S=1\text{A}$ , $V_{GS}=0\text{V}$	0.5	0.75	1.0	V